ILLINOIS

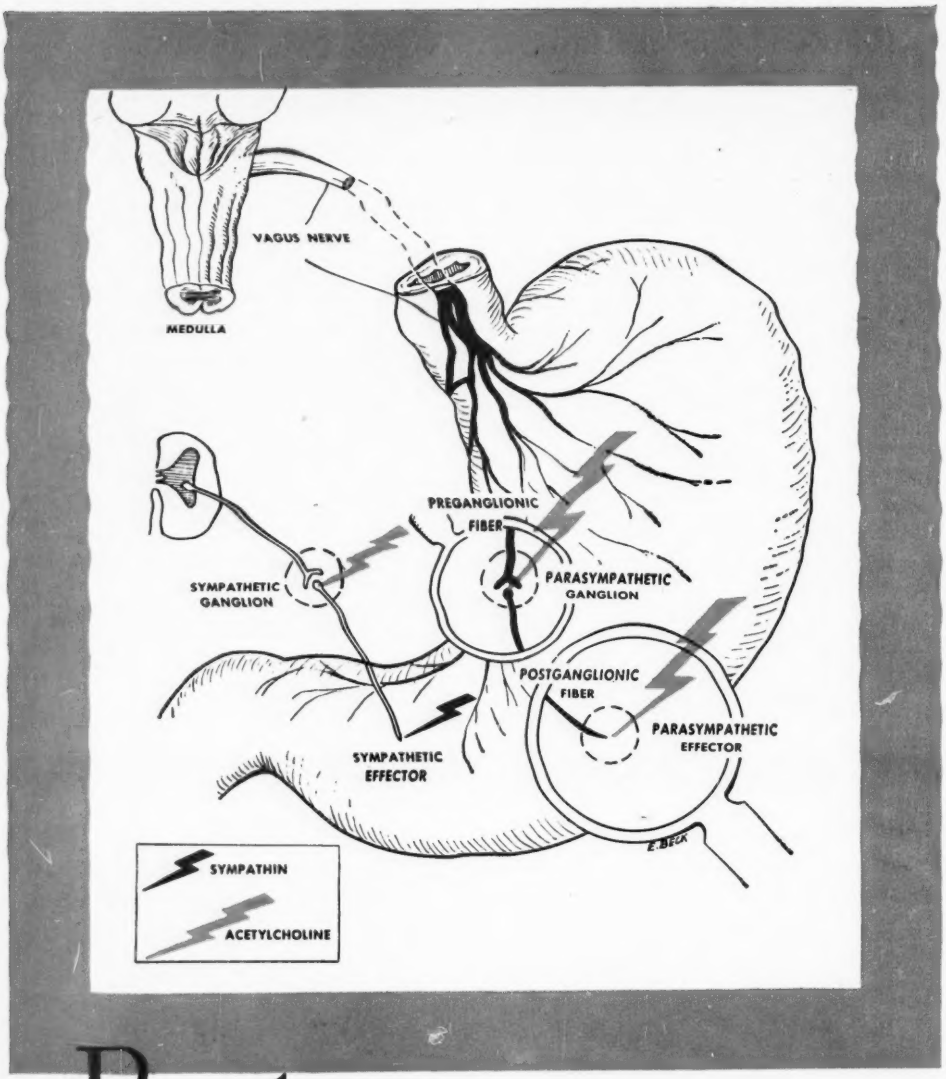
January, 1951

Acute Laryngo-Tracheo-Bronchitis and Its Management

Radioiodine in Diagnosis and Treatment of Diseases of the Thyroid

(See page 5 for Table of Contents)

ANNUAL MEETING — Illinois State Medical Society
CHICAGO, MAY 22, 23, 24



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Vol. 99, No. 1 JANUARY, 1951

THE GRIEVANCE COMMITTEE

At the 1950 annual meeting of the Illinois State Medical Society, the House of Delegates amended the By-laws to provide a Grievance Committee, and the following changes were made.

Under Chapter IX Committees, a Grievance Committee was added. Section 8; The Grievance Committee shall consist of six members, two of whom shall be elected each year by the House of Delegates to serve for a term of three years. At the first election held under this By-Law, two members shall be elected to serve one year, two for two years and two for three years. The functions of the Grievance Committee shall be: (1) To cooperate with the Grievance Committees of component societies, where such committees exist, in the effort to adjust differences between members of the Society and the Public. (2) To act for the Society in investigating complaints and/or initiating investigations concerning professional conduct and ethical deportment, in those counties which do not have a Grievance Committee.

In conducting such hearings at least two members of the Committee shall be assigned to conduct impartial hearings. At such hearings members of the Society may be ordered to appear and lay complainants may be invited to appear, if deemed necessary. The investigating members should attempt, through advice and counsel, to settle minor complaints and differences of opinion in the interest if improving public relations. If in the opinion of the investigators, fees have been excessive, they may suggest that the offending physician make some satisfactory adjustment, and may warn the individual that repetition of the offense may result in disciplinary prosecution with the Society.

If, after full investigation, the committee feels that evidence warrants, it may prefer charges of unethical conduct against the offender before the Ethical Relations Committee of the component Society to which he belongs.

(3) The Committee does not have the power to try a member or to impose discipline. It can investigate; it can advise; and it can prosecute. (4) The Committee shall report to the House of Delegates at the Annual Meeting.

At the meeting of the House of Delegates last May, when the amendments to the By-Laws were made to provide a Grievance Committee, it was agreed that the first Committee shall consist of the six immediate past presidents, they to draw lots to determine which shall be elected for one, two and three years respectively. Then they should meet, and select their own chairman. The committee at its first meeting selected Walter Stevenson, Quincy, as the first chairman.

All county medical societies which have not already done so, should have a Grievance Committee to assume responsibilities at the county level. If the county committee is either unwilling, or unable to arrive at a satisfactory conclusion, the matter may then be referred to the State Society Grievance Committee for final action. Several component Societies, including the large Chicago Medical Society, has had a Grievance Committee over a period of years, and complaints have been received and acted upon promptly and satisfactorily.

Fortunately, there have been only a few complaints submitted in Illinois for over-charging on the part of members of the State Medical Society. The public relations damage is greater in one authentic over-charge than can be offset by 100 instances where physicians have gone out of their way to help worthy but needy patients.

The subject of Grievance Committees and their functions was thoroughly discussed at the recent Third Annual Medical Public Relations Conference held in Cleveland, and all state and county societies were urged to have such committees functioning at the earliest possible moment.

The medical profession has many times in recent years been accused of failing to discipline members whose actions were alleged to be unethical. Through a properly functioning Grievance Committee, when complaints are received from laymen, they should be investigated by an impartial committee, and efforts should be made to settle the grievance. Many times in these investigations it has been found that the complaint was not made until efforts were made by the attending physician to collect his bill. These Committees have in many instances succeeded in showing the complainant that there was no justifiable basis for the complaint, and the matter was dropped, with the former patient satisfied that a careful investigation of the charges had been made.

This is good medical public relations, and it is hoped that all component societies in Illinois will set up its own grievance committee in the near future. In the meantime, when complaints are received, it is recommended that they be referred either to the office of the State Society Secretary, or directly to the State Society Grievance Committee for its consideration.

THE VALUE OF PERITONEOSCOPY

"For now we see through a glass, darkly". I Corinthians.

The diagnosis of disease within the abdominal and pelvic cavities is dependent mainly on palpation. It is true that inspection, percussion, and even auscultation, are at times of value and of course rectal examination and the history are not infrequently important. But, when all is said and done, abdominal diagnosis is often a more or less blind procedure.

The use of the trochar for removal of ascitic fluid goes back at least to the thirteenth century when Mundinus described it. The physicians of that era no doubt learned to draw some conclusions from the nature of the ascitic fluid, but with the perfection of the incandescent light by Edison and the invention of the cystoscope and other comparable visional instruments, it was only a question of time before someone, in this case John Ruddock, devised a method of inspecting the interior of the abdominal and pelvic cavities combined with the means of removing tissue for biopsy.

It usually takes some years to evaluate a device of this sort and to appreciate its defects and hazards. As to the former, it is obvious that when extensive abdominal adhesions are present, usually in about 5 per cent of prospective examinees, the peritoneoscope cannot be used. As to hazards, it may truly be said that fatal accidents are quite rare and may be due to the contemporaneous removal of tissue or to the nature of the disease investigated rather than to the manipulations associated with visualization. This was true of the one fatal accident among the 392 patients examined by Anderson and his associates.[1] It should be noted that the accident was a hemorrhage from the liver and, inasmuch as diseases of this organ may produce defects in the clotting mechanism of the blood, it is advisable to avoid liver biopsy unless the hemic prothrombin level has been tested before the peritoneoscopy and is practically normal.

As to the examination itself and its indications it is suggested that any patient with ascites of dubious etiology should be peritoneoscoped at least once unless there is some definite contraindication. Anesthetization with pentothal sodium,

[1]Anderson, Dockerty and Waugh; Proc. Staff Meetings Mayo Clinic, 1950, 25, 601.

supplemented with oxygen and occasionally with nitrous oxide was employed by the Anderson group and had the effect of facilitating the examination as well as giving comfort to the patient.

The most accurate results were attained in the diagnosis of neoplasms of the peritoneal cavity of which 94 per cent were correctly diagnosed. The diagnosis of hepatic disease was less accurate. The procedure was not recommended in known cases of gastric and ovarian malignancy to determine operability. The addition of biopsy to mere inspection measurably increased the value of the procedure. It would seem that in peritoneoscopy we have a valuable aid to the detection of the cause of ascites of unknown etiology which, in the hands of experts, is associated with but little risk to the patient and definitely improves diagnostic accuracy.

George Blumer M.D.

SOCIALISM OR BANANAS AND RICE?

"So far as the rule could be carried out, I used to exact from my native patients some tangible evidence of their gratitude for the help they had received. Again and again I used to remind them that they enjoyed the blessing of the hospital because so many people in Europe had made sacrifices to provide it; it was, therefore, now on their part a duty to give all the help they could to keep it going. Thus I gradually got it established as a custom that in return for the medicine given I received gifts of money, bananas, poultry or eggs. What thus came in was, of course, far below the value of what had been received, but it was a contribution to the upkeep of the hospital. With the bananas I could feed the sick whose provisions had given out, and with the money I could buy rice, if the supply of bananas failed. I also thought that the natives would value the hospital more if they had to contribute to its maintenance themselves according to their ability, than if they simply got everything for nothing. In this opinion about the educational value of the exaction of a gift I have been only strengthened by later experience. Of course no gift was exacted from the very poor and the old — and among the primitives age always connates proverty,"[1]

This paragraph was written twenty years ago by one of the truly great men of our time: Albert Schweitzer, musician, philosopher, theologian, author and doctor of medicine, who left a brilliant career in Europe to become a medical missionary in Africa, and founded a hospital in Lambarene on the edge of the primitive jungle. Those attending the Goethe festival at Aspen, Colorado, last summer will not soon forget his striking presence. In addition to his other gifts, Dr. Schweitzer is a close observer of human nature, and it did not take him long to observe that his native patients valued their medical care more when it was received on a fee-for-service basis, in contrast to their ingratitude when their medical care was free. The analogy to socialized medicine is all too clear.

This incident serves to illustrate one of the fundamental faults of any socialist giveaway program, that is that people simply do not value that which they receive for nothing; and this applies to Socialist programs in general as well as to socialized medicine. This ingratitude, or failure of appreciation, or whatever you may call it, probably was a factor in the public repudiation at the polls of the greatest give away program in the history of the world.

However, we must not wait for the socialism of our present administration to fall of its own weight and indeed we have not done so. We may congratulate ourselves as a profession that our efforts had some influence in the recent election, and we must continue to do all in our power to see that the public is informed. We are in politics and we must stay in politics if we wish our American way of life to continue.

J. C. S.

[1]Schweitzer, Albert. Out of My Life and Thought: An Autobiography. Translated by C. T. Campion. Postscript 1932-1949 by Everett Skillings. New York: Henry Holt and Company, 3rd Printing, August 1949.

In various forms — whether poliomyelitis, tuberculosis, cardiovascular disease, diabetes or any of the other abnormalities that are likely to alter a patient's social and economic activiies — these chronic conditions account for three fourths of all illness today. Progressive control of infectious diseases and the increasing number of elderly people in the population are bringing about a situation in which the chronic illnesses and preventive medicine may in the future demand the entire attention of physicians. Ediorial, New England J. Med., August 10, 1950.

SOCIALIZED MEDICINE IS NO BARGAIN

William L. Hutcheson,

General President, United Brotherhood of Carpenters & Joiners of America and Vice President of the American Federation of Labor

I am against socialized medicine. So is the organization which I have the honor of heading. At the Twenty-sixth General Convention of the United Brotherhood of Carpenters and Joiners of America, held in Cincinnati last September 1, 300 delegates, representing better than 54 per cent of the total membership, voted down a resolution to support the National Health Program. This probably does not jibe with the feelings of a good deal of the rest of the labor movement because much of the pressure for "free" medical care is coming from labor organizations. But it does reflect my sentiments and the sentiments of our recent convention.

Saving a dollar has never been distasteful to me. In fact I like to get as much for my money as the next man. That is one of the reasons why I oppose socialized medicine. It is no bargain. It looks cheap the way the backers present it, but when you dig down under the fancy layer of propaganda frosting you find that it can be mighty expensive. The British people have already discovered this fact. The July issue of International Labor Office, contains some very interesting data on the operation of the National Health Service in Britain. I quote a few lines of that report:

"The total (gross) cost of the National Health Service in 1948-1949, the first year of operation, greatly exceeded the original estimate. This was 265 million pounds, as against a revised estimate of 368 million pounds, with a net cost to the taxpayer of 278 million pounds. The revised estimate for the year 1949-1950 was 450 million pounds as against an original estimate of 352 million pounds. For the 1950-1951, the cost is estimated at 484 million pounds; in 1946 when the Bill was passed, the service was believed to cost 167 million pounds a year."

In case you don't understand what the International Labor Office is, I can best explain its functions by quoting a bit from its preamble:

"The International Labor Office is an association of nations, financed by Governments and democratically controlled by representatives of Governments, of management and of Labour organizations.

"Its purpose is to promote social justice in all countries of the world. To this end it collects facts about labour and social conditions, formulates minimum international standards, and supervises their national application."

The I. L. O.'s publication, "International Labour Review", is published in the United Kingdom. As an international organization, I. L. O.'s findings are supposed to be strictly impartial.

Getting back to the report; if I read it correctly, service that was supposed to cost 167 million pounds per year when the plan was set up in 1946 costs 484 million pounds per year, and the end is not yet in sight. By my old-fashioned kind of arithmetic that is an increase of better than 345 per cent and I am sure my poor old mother, who always made a dime do the work of a quarter, would not consider that kind of proposition any bargain.

I know! I know! The socialists claim that money is of no consequence in the matter of national health; — getting the poor the same quality and quantity of medical care as the rich can get under private enterprise is the advertised objective of the National Health Program. That sounds fine, too; but on Page 57 of the I. L. O. report, I find the following sentences:

"Survey of the distribution of doctors by boroughs shows that certain wealthier districts (of London) have an average of one doctor for 1,261 patients, while in the inner East End there are 2,472, or twice as many patients, per doctor. For a group of southern boroughs, the average is 2,897."

If that isn't the "one horse and one rabbit" recipe transferred from the meat pie maker's kitchen to the National Health program, then I need new reading glasses. I have tried to figure it from all angles but the answer I always come up with is that the lumbago, shingles and bellyaches of London's South Siders get only half the attention that similar ailments get in the swankier districts. For all the planning that has been done, there is still an uneven distribution of doctors in London. If the backers

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Prepared for Delivery at a Joint Session of the House of Delegates of the American Medical Association and the Third Annual Conference of the A.M.A. National Education Campaign, Cleveland, Ohio, December 7, 1950

of the National Health Program are to achieve their objective of equal health protection for all, the next step must be to tell doctors when and where and how they are to practice. Therein *lies my greatest fear of socialization.*

Socialization and death have one thing in common; you cannot be either a little bit socialized or a little bit dead. It is whole hog or nothing. After two years of the National Health Program, London doctors still have preferences as to where they want to practice. By compulsion *of one kind or another, somebody is going to have* to shoo doctors away from the fancy neighborhoods into the tenement districts or the program will wind up where it started. When the government is given authority to tell one group or one profession where and how its members are to work, no other group or profession can be safe for long.

If the day ever comes to America when Uncle Sam usurps the power to dictate to doctors under a health plan, it will be a sad day for carpenters. Adequate housing is still an unsolved problem in this country, especially for the poor. If it is logical to nationalize the medical profession to get more medical service for the poor, it is equally logical to nationalize the home construction industry to get roofs over the heads of the lower income groups.

I do not know much about doctors, but I know quite a bit about carpenters. They are an independent lot. They want to work where and how they please. The first bureaucrat who told a carpenter he had to work in Little Rock when he wanted to work in Lancaster would be gumming his food for lack of teeth. Carpenters want to be free agents; free to work where they want to; free to negotiate the terms of their wages and working conditions through collective bargaining; yes, even free to leave the industry and try their luck at something else if the spirit moves them.

They will retain these freedoms only so long as all other groups retain theirs. Socialization is like a wolf with a tapeworm; once it starts gnawing, it never can stop. Socialized medicine would only be the first bite out of our free enterprise system; it would not be many years before *the carpenters would be feeling the teeth of* socialization on the seats of their overalls. Any way you look at it, socialized medicine is no bargain and the carpenters want none of it.

I know that the backers of the national health plan in this country resent the term "socialized medicine". They have all sorts of arguments to "prove" that doctors and patients will remain free as the air under their program. They make a strong case. Perhaps if human nature were less ornery and less avaricious, an idealistic health program might work out all right. But *so long as people have preferences, so long as* Park Avenue has more appeal than Hell's Kitchen, there will be an uneven distribution of doctors under any plan that does not contain compulsion. And once compulsion enters the picture, the rights and freedoms of all citizens stand in jeopardy. To me, it is as simple as that. *For forty years, I have fought communism tooth* and toenail because I do not want anyone pushing me around. I certainly do not want to put my head into a socialization noose voluntarily when the results can be as undesirable as communism.

I have always respected the medical profession for the fine contribution American medicine has made to human welfare. As I watched your battle against regimentation during the past two years, I have added to that respect. The physicians of this country have shown that they are willing to fight for their conviction. I salute you today not only as doctors but as crusading citizens as well. We in the labor movement have our own cross of regimentation to bear. The fight you are making is part of the same war. It is a war against concentration of authority in a few hands in Washington. As a veteran of forty years in the labor movement, I know what it is to fight for human rights. I am happy to take my stand beside you.

CORRESPONDENCE

RADIATION PHYSICS

The Graduate Division of Northwestern University Medical School announces a course in radiation physics. As a consequence of popular demand, the course will be opened to registration for all interested physicians.

Days and dates: Every Monday, January 8, 1951 through April 23, 1951. Every day, April 30, 1951 through May 5, 1951.

Time: 7:00 P.M. to 9:00 P.M.

Place: Gilmer Hall, Room 1276, Ward Memorial Building, 303 East Chicago Avenue, Chicago, Illinois (Northwestern University Medical School).

Fees: Residents in any specialty $10.00
Practicing and other physicians $25.00

Application: Send application with proper remittance to Doctor Gordon Raleigh, Room 492, Ward Building, 303 East Chicago Avenue, Chicago, Illinois. Remittance should be in cash, check, or money order payable to Northwestern University. A receipt-ticket will be returned to the applicant and must be presented for admission to each session.

Monday, January 8, 1951
Radiation Physics, Robert Landauer, Ph.D.
Associate in Radiology (Physics), Northwestern University Medical School, Diplomate of the American Board of Radiology in Physics.

Monday, January 15, 1951
Radiation Physics, Dr. Landauer

Monday, January 22, 1951
Therapy Equipment, E. Dale Trout, Sc.D.
Assistant to the Vice-President and Technical Consultant in Therapeutic Equipment, General Electric X-ray Corporation.

Monday, January 29, 1951
Diagnostic Equipment, John Thomas
Technical Consultant in Diagnostic Equipment, General Electric X-ray Corporation.

Monday, February 5, 1951
Dark Room Chemistry and Physics, Arthur Fuchs
Education Department, the Eastman Kodak Company.

Monday, February 12, 19, 26, 1951
Radiation Physics, Dr. Landauer

Monday, March 5, 1951
Radiation Physics, Dr. Landauer

Monday, March 12, 1951
Radiation Therapy, Anna Hamann, M.D.
Assistant Professor of Radiology, Northwestern University Medical School. Director, the Department of Radiation Therapy, Evanston Hospital.

Monday, March 19, 26, 1951
Radiation Physics, Dr. Landauer

Monday, April 2, 9, 16 23 1951
Radiation Physics, Dr. Landauer

Monday, April 2, 9, 16, 23, 1951
Radiation Physics, Dr. Landauer

Monday, April 30, 1951
Radio-active Isotopes in Biology and Medicine, Edith H. Quimby, Sc.D.
Associate Professor of Radiology (Physics), College of Physicians and Surgeons, Columbia University, New York. It is considered a singular privilege and honor for Northwestern University Medical School in presenting this distinguished guest speaker.

Tuesday, May 1, 1951
Radio-active Isotopes in Biology and Medicine, Dr. Quimby
Wednesday, May 2, 1951
Radio-active Isotopes in Biology and Medicine, Dr. Quimby
Thursday, May 3, 1951
Radio-active Isotopes in Biology and Medicine, Dr. Quimby
Friday, May 4, 1951
Radio-active Isotopes in Biology and Medicine, Dr. Quimby
Saturday, May 5, 1951
Radio-active Isotopes in Biology and Medicine, Dr. Quimby

CLINICS FOR CRIPPLED CHILDREN LISTED FOR FEBRUARY

Doctor Herbert R. Kobes, director of the University of Illinois Division of Services for Crippled Children, has released the February schedule of clinics for physically handicapped children. The Division will conduct 15 general clinics providing diagnostic orthopedic, pediatric, speech and hearing examinations along with medical, social and nursing services. There will be 4 special clinics for children with rheumatic fever and 1 for cerebral palsied children.

Clinics are held by the Division in cooperation with local medical and health organizations and groups, hospitals, civic and fraternal clubs, and other interested groups. From private physicians, who are certified Board members, are selected the clinicians. Any private physician may refer or bring to a convenient clinic any child or children for whom he may want examination or may want to receive consultative services:

The February clinics are:

February 6—Vandalia, American Legion Home
February 7—Elgin, Sherman Hospital
February 8—Chester, St. John's Lutheran School
February 8—Springfield, St. John's Hospital
February 8—Elmhurst (Rheumatic Fever), Memorial Hospital of DuPage County
February 9—Chicago Heights (Rheumatic Fever), St. James Hospital
February 13—Peoria, St. Francis Hospital
February 13—E. St. Louis, Christian Welfare
February 14—Hinsdale, Hinsdale Sanitarium
February 15—Rockford, St. Anthony's Hospital
February 15—Litchfield, St. Francis Hospital
February 20—Carrollton, Grade School
February 21—Chicago Heights, St. James Hospital
February 22—Tuscola, Armory
February 22—Normal, Brokaw Hospital
February 23—Chicago Heights (Rheumatic Fever), St. James Hospital
February 27—Peoria, St. Francis Hospital
February 27—Effingham (Rheumatic Fever), Douglas Township Bldg.
February 28—Springfield (Cerebral Palsy), Memorial Hospital
February 28-Aurora, Copley Hospital

COMMISSION ON CHRONIC ILLNESS

A national conference has been called to explore ways of *preventing* chronic disease, announced Morton L. Levin, M.D., Staff Director of the new Commission on Chronic Illness*.

Attacking chronic disease — the nation's Number 1 health problem — at its roots through *prevention* the Commission has scheduled a Conference on Chronic Disease: Preventive Aspects to be held in Chicago, March 12-14, 1951.

Co-sponsors of the national Conference on preventive aspects are the National Health Council and the U. S. Public Health Service.

Discussions of this "working conference" will be based on authoritative summaries of present day scientific knowledge regarding prevention and early detection of major chronic diseases including: cancer; heart disease; arthritis and rheumatism; neuro-muscular disorders, including poliomyelitis, multiple sclerosis, cerebral palsy, and epilepsy; diabetes; blindness; deafness; tuberculosis and syphilis, said Dr. Levin.

Emotional factors in chronic disease; malnutrition including obesity as a cause, heredity in chronic disease, and occupational causes of chronic disease will also be considered, he said.

Practical application of this existing knowledge to community detection and prevention programs will be considered by the conferees.

*An independent national agency founded jointly by the American Hospital Association, American Medical Association, American Public Health Association, American Public Welfare Association.

MISSISSIPPI VALLEY ESSAY CONTEST

The Eleventh Annual Essay Contest of the Mississippi Valley Medical Society will be held in 1951. The Society will offer a cash prize of $100.00, a gold medal, and a certificate of award for the best unpublished essay on any subject of general medical interest (including medical economics and education) and practical value to the general practitioner of medicine. Certificates of merit may also be granted to the physicians whose essays are rated second and third best. Contestants must be members of the American Medical Association who are residents and citizens of the United States. The winner will be invited to present his contribution before the meeting of the Society to be held in Peoria, Ill., Sept. 19, 20, 21, 1951, the Society reserving the exclusive right to first publish the essay in its official publication. All contributions shall be typewritten in English in manuscript form, submitted in five copies, not to exceed 5000 words, and must be received not later than May 1, 1951. The winning essays in the 1950 contest appear in the January 1951 issue of the Mississippi Valley Medical Journal.

Further details may be secured from Mississippi Valley Medical Society, 209-224 W. C. U. Building, Quincy, Illinois.

"YOUR MENTAL HOSPITALS" — PSYCHIATRIC AID IN CRIMINAL CASES

Assistance in the diagnosis and differentiations of psychiatric problems in criminal cases has been rendered by the Illinois Department of Public Welfare for a number of years. At present, these activities are carried on by the staff of the Division of Medical Care and Treatment, supplemented by a panel of consultant psychiatrists.

Whenever the question of insanity comes before the Court, a jury is impanelled to pass on the sanity plea. In order to help determine this, the Division of Medical Care and Treatment offers its services to the Courts so that expert psychiatric opinion can be obtained relevant to the issues involved.

By recent legislative enactment in the State of Illinois, the term "insanity" is used only in criminal cases. In civil cases, the term "mentally ill" is used. The civil cases are admitted to the public and private mental hospitals under the Illinois Revised Mental Health Act. There are three types of Commitments under the Criminal Code:

1. *Individuals charged with a felony* on whom a plea of insanity is made.
   The test for insanity varies depending upon whether insanity is considered to be present:
   a. at time of commission of the crime,
   b. before the trial,
   c. before judgment.
2. *The Criminal Sexual Psychopath*
   (Illinois Revised Statutes, Chapter 38, Sec. 820-825)
3. *The Criminal Sexual Psychopaths upon expiration of their penitentiary sentences.*
   (Illinois Revised Statutes, Chapter 108, Sec. 112)

A working knowledge of the Revised Mental Health Act, the Mental Deficiency Act, and Commitments under the Criminal Code is required by those working in this field. Phychiatric consultations to the Courts are available throughout the various counties of the State of Illinois. In this manner, the Illinois Welfare Department continues to render service to all concerned, in determining the responsibility of the defendant as well as making recommendations toward the disposition of the alleged insane person presented before the Courts.

George A. Wiltrakis, M.D.
Deputy Director

NATIONAL CONFERENCE ON MEDICAL SERVICE

The twenty-fourth annual meeting of the National Conference on Medical Services will be held Sunday, February 11, 1951, in the Red Lacquer room of the Palmer House in Chicago. We would very much appreciate your publishing this preliminary announcement of the meeting at the earliest possible date.

The meeting is of special importance to presidents, secretaries, and public relations personnel of state and county medical societies.

Robert E. Fitzgerald, M.D.
Secretary, National Council
on Medical Service

YOU, YOUR COLLECTOR, AND YOUR COLLEAGUES

You make patients better, but your collector makes better patients.

Every unpaid fee that your collector recovers makes a better patient out of the person from whom he collected. Most of the fees you carry on your books are not there because your patients are experiencing genuine financial strain. They are unpaid because a colleague who preceded you as the patient's doctor failed to take steps to collect his fee. And the patient who finds it inconvenient, but not impossible, to pay you remembers that the other doctor forgot about his bill; and hopes that you, too, will tire of sending statements. Even those who never owed a doctor share the universal knowledge that doctors wait, and even forget about bills.

So payment of your fee often depends on what other doctors did about their fees, and the fees now due these other doctors depend on what you did in the past about unpaid fees which were then due you.

When your collector recovers a fee for you, the patient has then and there learned that you must be promptly paid in the future; and so must the other doctors who treat him. That is the combined contribution that you and your collector make to your colleagues. When your local collector makes a collection for another doctor, they in turn have combined to make a better patient for you.

To make this reciprocal movement continental in scope, the best collection organizations in every community, including a number of Chicago organizations, have joined to form the American Collectors Association. Participating collectors are able to refer accounts to whichever city your patient may have moved; and somebody representing you will knock on the delinquent patient's front door to ask for your fee.

Moreover, the out of town organization selected for you by the collector who is a member of the American Collectors Association will be bonded and is a member of its high standards of performance and ethics. Similarly, the collector in your community who was selected for membership in the association has also met the same high standards. Therefore your local collector, affiliated with the American Collectors Association, is equipped to give you superior service; and through him, you serve yourself and your colleagues by creating better patients for doctors everywhere.—*Chicago Medical Society Bulletin, May 20, 1950.*

AMERICAN COLLEGE OF ALLERGISTS ANNUAL MEETING

The American College of Allergists will hold its seventh annual meeting at the Edgewater Beach Hotel, Chicago, Illinois, February 12-13-14, 1950. This year these will be section meetings: Psychosomatic aspects of allergic diseases, under the leadership of Harold Abramson, M.D. of New York; on Pediatrics, under Bret Ratner, M.D. of New York; on Allergies of the Nose and Throat, under George Shambaugh, M.D. of Chicago; on Allergic Diseases of the Skin, under Rudolph Baer, M.D. of New York City; and the Allergic Aspects of Rheumatism and Arthritis, under George Rockwell, M.D. of Cincinnati, as well as a general session of the College when hay fever, asthma and the newer drugs will be discussed under the leadership of John Mitchell, M.D. of Columbus, Ohio, the President of the College.

This year the College is trying for the first time the experiment of offering its post collegiate instructional course on the three days just preceding its annual conclave. This course has been arranged with the thought in mind that 10% or more of all the patients in a physician's practice have an allergic component in their complaint. (The faculty consists of some 25 outstanding allergists.) The course is therefore an extremely practical one designed for any physician who wants to learn the basic principles of diagnosis and treatment of allergic individuals and techniques that are useful in the management of these patients. A fee of $35.00 will be charged for the three-day course lasting through February 9-10-11. For further information and registration write Fred Wittich, M.D., Secretary-Treasurer, American College of Allergists, La-Salle Medical Building, Minneapolis, Minnesota.

ORIGINAL ARTICLES

Acute Laryngo-Tracheo-Bronchitis and Its Management

Hans Von Leden, M.D., F.A.C.S.
Chicago

Since the control of diphtheria and the virtual extinction of diphtheritic laryngitis a disease commonly known as "croup" has assumed prime importance as the leading cause of obstruction of the respiratory passages. So it is not surprising that laryngologists, pediatricians, and general practitioners alike have taken an increasing interest in this entity, and that the recent literature abounds with references to acute laryngo-tracheo-bronchitis, to call it by its scientific name. It is not the purpose of this paper to review the pertinent literature or to enter into a debate on the nomenclature or etiology of this disase, but rather to present a practical outline of therapy which we have employed successfully and which can be followed without difficulty in any other hospital. For a detailed description of the disease and all controversial aspects the interested reader is referred to Neffson's[1] excellent book *Acute Laryngotracheobronchitis,* which was published within the past year.

As the name implies, laryngo-tracheo-bronchitis is an acute infection of the lower respiratory passages, extending from the larynx down into the smaller sub-divisions of the bronchial tree. It is endemic throughout the year, but may reach epidemic proportions in any locality during the winter months. Alert pediatricians and general practitioners with improved diagnostic facilities have demonstrated the high incidence of this disease. During the year 1949 seventy cases with this diagnosis were seen at St. Francis Hospital, Evanston, out of a total number of two thousand sixty admissions to the Pediatric

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Presented at the 110th Annual Meeting of the Illinois State Medical Society, Section on Eye, Ear, Nose and Throat, May 24, 1950, Springfield.

Department, which would indicate that one out of every twenty-nine children or more than three percent suffered from this condition. It shows a definite affinity for the male sex, boys representing eighty percent of our tracheotomized cases. Children between the ages of one and three years are commonly affected, although our patients ranged in age from a few months to fourteen years.

The pathologic picture is that of a descending inflammation of the mucous membranes lining the lower respiratory tract, followed by congestion, edema, and exudation of a thick tenacious secretion. Ulceration and crusting occur with superimposed infection in the more severe cases. If the respiratory obstruction is permitted to continue over a period of time, secondary vascular changes take place as the result of increased negative intrathoracic pressure. Galloway[2] stresses the importance of this vicious cycle by

TABLE 1

ACUTE LARYNGO — TRACHEO — BRONCHITIS
LOCAL SYMPTOMS:

Cold — ?
Croupy Cough
Stridor
Hoarseness
Retractions
Decrease in breath sounds

showing that the elevated negative pressure in the thoracic cavity causes further congestion and capillary damage; this in turn increases the edema and exudation, and eventually leads to atelectasis, emphysema, and severe pulmonary and cardiac embarrassment. A full appreciation of these abnormal pathologic changes is essential for the selection of those therapeutic measures, which lead to the full restoration of normal physiologic processes. These principles form the basis of our management and will be discussed in detail under this heading.

The symptomatology of acute laryngo-tracheo-bronchitis is so well known to this audience that no attempt will be made to discuss the individual signs or symptoms. Table 1 reviews the local symptoms in the order of their appearance. Table 2 indicates the general findings: anorexia, fever

TABLE 2

ACUTE LARYNGO — TRACHEO — BRONCHITIS
GENERAL SYMPTOMS:

Anorexia
Vomiting
Fever
Leucocytosis
Increased pulse and respiration
Toxic Symptoms
* * *
Circum-oral pallor, Cyanosis
Restlessness, Anxiety
Dehydration
Acidosis
Alkalosis
Exhaustion, Coma, Death

and toxemia of various degrees are usually present; as the illness increases in severity, the respiratory obstruction influences the general condition of the patient and other symptoms supervene, as outlined in this Table.

In the majority of cases a correct diagnosis of acute laryngo-tracheo-bronchitis can be made on the basis of the history and clinical findings alone. While the differential diagnosis includes all obstructions of the lower respiratory passages, there are only two other infectious diseases with similar findings: diphtheritic laryngitis and acute epiglottitis or supraglottic edema. If the history is very recent and the patient appears unusually toxic, an acute epiglottitis may be suspected. The diagnostic signs of this infection, due to Hemophilus influenzae B, are described on Table 3. The differentiation of early diphtheritic laryngitis presents a most difficult diagnostic problem; fortunately, this condition is now so rare as to be almost a curiosity. In any doubtful case it is always advisable to perform a diagnostic laryngoscopy. I fully agree with Neffson[1]

TABLE 3

SUPRA-GLOTTIC EDEMA
or
ACUTE EPIGLOTTITIS

DIAGNOSTIC FINDINGS:
Sore throat
Muffled voice
Toxemia — severe
Inspiratory Stridor
Expiratory "Rattle"
Sitting position
Appearance of Epiglottis

that "this procedure is absolutely harmless in skilled hands and can be performed in one or two minutes with a minimum of discomfort to the patient."

In any discussion of laryngo-tracheo-bronchitis it must be remembered that the prognosis depends largely on early recognition of the disease and timely hospitalization. The mortality has always been high; it varies anywhere from fifteen percent to one hundred percent depending on the diagnostic criteria and the management reported by different authors. Yet in the past two years my colleagues in the Department of Otolaryngology at St. Francis Hospital and I have had eleven consecutive cases of fulminating laryngo-tracheo-bronchitis requiring tracheotomy, with no deaths (Galloway 1, Leden 1, Soper 1, Von Leden 8). Galloway and his associates[3] have collected a similar series of fourteen consecutive cases in their private practice. These cases were favorable, because the patients were referred early by alert pediatricians and general practitioners, but I feel confident that similar results could be obtained anywhere by early hospitalization and treatment along basic physiologic principles.

It is the writer's opinion that all children with respiratory obstruction should be hospitalized immediately. An inflammatory swelling of the loose tissues in the subglottic area may cause asphyxia in a matter of hours. Last Christmas Eve I performed an emergency tracheotomy on a cyanotic two year old boy who had developed his first symptoms of respiratory involvement three hours previously. Less than a month ago I was called to the hospital to see another three year old youngster who had died of asphyxia on his way to the hospital. The total history of respiratory difficulties in this case extended over less than three hours, a poignant reminder that acute laryngo-tracheo-bronchitis requires immediate attention.

All treatment should be directed towards improving the failing respiration. In most cases this can be accomplished by medical means alone. *Rest* is invaluable to keep oxygen requirements at a minimum and to conserve strength. Small doses of diluted whisky by mouth or barbiturates by rectum may be used to allay anxiety. Strong *sedation* is contraindicated, since restlessness is an important sign of increasing obstruction. Opiates lower the struggle for air and prevent the expectoration of accumulated secretion by inhibiting the cough reflex. Atropine increases the stickiness of the exudate and must not be used. *Fluids* should be given orally or parenterally in sufficient amounts to relieve dehydration and to liquefy secretions. *Oxygen,* administered through a nasal catheter or through a nebulizer, supplies this essential element and relieves the distressing symptoms of anoxia. *Antibiotics* in the form of penicillin, streptomycin or aureomycin should be prescribed early in large doses for their long-range effect. It must be emphasized that they are of no value in relieving acute respiratory distress.

This process is aided most by an effective system of humidification. A relative humidity of 90% at room temperatures of 68-70°F. is ideal: it reduces loss of body fluids, liquefies tracheo-bronchial secretions and soothes the inflamed mucous membrane. The cool air assists in the reduction of the high fever, thus lowering the metabolic rate and the oxygen requirements of the patient. In contra-distinction, the ordinary croup kettle or other forms of steam production heat the surrounding air and thereby often actually decrease the relative humidity of the room. Unfortunately the cost of commercial units for the production of heatless humidity has been prohibitive and, as a result, few hospitals have purchased such equipment. Thanks largely to the cooperation of our active and far-seeing Pediatric Department and of Mr. Leo Lynk, our resourceful engineer, we have solved this problem by the perfection of an automatic heatless humidity unit at a material cost of about $125.00.

In this unit, compressed air is passed through a system of strainers and filters to a pressure regulator, which reduces the pressure to forty pounds per square inch. The air is then forced over two siphons mounted in a constant level water tank, and a fine spray is produced. The consistency of this spray can be varied by adjusting the spray nozzles. The entire apparatus is turned off and on by a magnetic valve, which is controlled by an automatic humidistat or hand control, as desired. The room temperature is regulated by an ordinary radiator with thermostatic control.

All children admitted to St. Francis Hospital with the diagnosis of acute laryngo-tracheo-bron-

chitis are immediately taken to this high-humidity room, and the good results have surpassed our expectations. Several patients with this disease who would have required surgical intervention in our old overheated steam room were treated expectantly and recovered promptly. The length of hospitalization for many others has been decreased considerably. Any hospital should be in a position to duplicate this apparatus and give its patients the benefit of these good results.

If medical treatment fails or is inadequate to relieve the existing obstruction, prompt surgical intervention is indicated. Mechanical relief can be obtained by bronchoscopy and aspiration, tracheotomy, or intubation. Bronchoscopic aspiration and inspection is a useful preliminary to tracheotomy, although it is by no means necessary for the performance of this operation. In an acute emergency the Mosher Life Saver may provide temporary relief preliminary to a tracheotomy. The relative values of intubation and tracheotomy have been the object of much argument and debate. It is the opinion of the writer that tracheotomy is the treatment of choice. After intubation an expert must be on hand at all times to reinsert a coughed-out tube; this is obviously not feasible in most hospitals. Table 4 shows the reasons for performing a timely tracheotomy. Immediate restoration of the airway and of normal intrathoracic pressure, and prevention of sudden asphyxia and gradual exhaustion are the main objectives. Additional advantages are automatic provisions for setting the larynx at rest, for easy access to the trachea and bronchi during the aspiration of crusts and bronchial secretions and for irrigating the smaller subdivisions of the bronchial tree. Normal food intake is also encouraged by the relief of the obstruction.

TABLE 4

ADVANTAGES OF TRACHEOTOMY IN ACUTE LARYNGO — TRACHEO — BRONCHITIS

1. Restoration of airway
2. Prevention of exhaustion
3. Prevention of sudden asphyxia
4. Restoration of normal intra-thoracic pressure
5. Facilities for aspiration
6. Facilities for irrigation
7. Complete rest of larynx
8. Provision for normal food intake

TABLE 5

ACUTE LARYNGO — TRACHEO — BRONCHITIS
INDICATIONS FOR TRACHEOTOMY

I. Severe obstruction:
   1. Change in stridor
   2. Restlessness
   3. Deep retractions
   4. Pallor — Cyanosis
   5. Anxiety
   6. Absent breath sounds

II. Exhaustion:
   1. Listlessness
   2. High fever
   3. Rapid, shallow breathing
   4. Weak, fast pulse

III. Prolonged obstruction.

The socalled disadvantages of a tracheotomy are readily refuted: Drying of tracheo-bronchial secretions can be avoided in a high-humidity room or by the use of an Albers[4] nebulizer. A conspicuous scar is easily repaired by plastic surgery. Surgical shock is a small factor compared to the overwhelming relief experienced by the patient. Restless and struggling children usually become quiet and cooperative as soon as the trachea is incised and the respiratory obstruction is bypassed; restful sleep often intervenes while the patient is still on the operating table. Tracheal granulations and strictures can generally be avoided by the removal of an elliptical segment of the anterior tracheal wall. This procedure prevents buckling and narrowing of the trachea and inflammatory granulations at the cut edges of the split cartilaginous rings, as demonstrated by Waldapfel[5]. In eight years of laryngological work at large private and charity institutions the writer has never seen a case of fatal pneumothorax or fatal mediastinal emphysema following a correct tracheotomy. This observation has been confirmed by Figi[6], Galloway[3], and Leden[7] on the basis of their experiences in several hundred cases.

The writer's indications for tracheotomy in acute laryngo-tracheo-bronchitis are presented on Table 5. Among the danger signs of severe obstruction I should like to stress particularly restlessness and anxiety. This combination is an indication of extreme obstruction which must be

relieved instantly. Signs of exhaustion call for the same prompt treatment. Prolonged obstruction, though only moderately severe, may lead to serious and irreversible changes in the respiratory and cardiovascular systems, as described in detail above; these should be prevented by a timely tracheotomy. One cannot expect good results with a tracheotomy after obstruction or cardiac exhaustion have passed beyond the stage of possible recovery. Two factors have been the chief contributors to the poor results with tracheotomy reported by some authors: a delay in surgical intervention until the patient is in extremis, and inadequate post-operative care.

No attempt will be made to discuss the care of a tracheotomized child in front of this select audience, all of whom have had ample experience with such cases. Close attention to all the details of the postoperative care is just as important as the surgical procedure. It has been the experience of the writer that one cannot tell a nurse too often to keep a faithful watch over her charge. In my opinion, our own good results are largely due to the constant supervision of the postoperative treatment by the nursing staff in our Pediatric Department. Postural drainage, frequent aspirations and irrigation of the trachea and bronchi require constant attendance and meticulous care. In severe cases of bronchial inflammation the inhalation of penicillin and streptomycin through a nebulizer by aerosolization may be of distinct advantage after tracheotomy, in addition to the medical supportive treatment outlined above.

Decannulation can usually be accomplished between the fourth and eighth postoperative days, unless the patient has developed a severe secondary infection of the bronchioles or an associated pneumonia. However, the incidence of these complications is low, if a tracheotomy is performed in time and if the patient is kept in a high-humidity room after the surgery. After decannulation and subsistence of all symptoms it is advisable to transfer the patient to another room for a period of twenty-four hours for adaptation to normal humidity and temperature before dismissal from the hospital.

CONCLUSION

Results obtained in the treatment of acute laryngo-tracheo-bronchitis depend directly on a thorough understanding of the underlying physiologic and pathologic processes and application of these principles to the management. Early recognition and hospitalization, good medical supportive care, including the use of a heatless humidity unit, and prompt tracheotomy when surgical intervention is indicated, lead to a better prognosis and decrease the mortality for this disease. Eleven consecutive cases of acute fulminating laryngo-tracheo-bronchitis treated by tracheotomy without a mortality, prove the value of this management.

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Radioiodine (I^{131}) in the Diagnosis and Treatment of Diseases of the Thyroid

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Radioactive iodine has been the most important tool responsible for the recent advances made in our understanding of normal and abnormal thyroid function. It was first made available in 1934 by Fermi[1] and first used in man in 1938 by Hertz, Roberts and Evans[2] and Hamilton[3]. Of the several isotopes of iodine known, I^{131} prepared in the atomic pile from tellurium is used almost exclusively. This isotope has a half-life of eight days and disintegrates to xenon emitting a beta particle and two gamma rays[4]. This emission of radiation is detected by Geiger counters or sensitive photographic film permitting measurement of quantities too small to be found by other means. In the usual tracer studies 0.008 micrograms of I^{131} or less are given[5]. This quantity, the atoms of which are disintegrating at the rate of 3.7 x 10^7 times a second, is called a millicurie and is the unit in terms of which most isotope dosages are expressed.

The state of thyroid activity has been shown to influence the accumulation of iodine within the gland[6]. This fact is not only important in the diagnosis of thyroid disease but also offers a new avenue of approach to the clinical study of normal and disordered thyroid function. It is basically different from other available tests of thyroid activity such as the basal metabolic rate, blood cholesterol, and plasma protein bound iodine determinations. As the result of extensive investigation it appears that at least two distinct factors are responsible for the appearance of radioiodine in the thyroid gland. The first has been called the "iodide trap" and represents the ability of the thyroid epithelial cells to remove inorganic iodine from the blood and concentrate it in their cytoplasm[7, 8]. The second factor is the ability of these cells to bind the inorganic iodine to tyrosine to form diiodotyrosine and then thyroxin, the latter, in association with serum globulins[9], probably being the form of the circulating thyroid hormone[10]. The thyroid also stores hormonal iodine in the colloid in association with protein[11]. These two factors may be dissociated by various drugs. Administered radioiodine accumulates in the thyroid gland in an exponential fashion, reaches a peak between 24 and 48 hours and then slowly declines. During thiouracil therapy, however, the iodine accumulates rapidly but reaches a peak within one to three hours and disappears in twenty-four hours[10]. (The same is true during treatment with sulfonamides[12]). The iodine has been shown to remain in the inorganic form, the binding with tyrosine having been blocked by the drug[13, 14]. On the other hand, thiocyanates act as a specific poison for the iodide trap and prevents accumulation of inorganic iodine in the thyroid gland[7, 10]. Thiouracils thus prevent the storage of organically bound iodine and thus the formation ultimately of the thyroid hormone.

The radioiodine concentration in the human thyroid gland can be measured in several ways. Information gained by such studies are of value not only in the diagnosis of thyroid disease but also of importance in the determination of dosages of radioiodine to be used therapeutically. This report presents a method of estimation of thyroid activity in vivo and the application of this method in the treatment of diseases of the thyroid gland.

Material and Methods: Tracer doses of I^{131} ranging from 0.1 to 1.0 millicuries were given to 58 patients with and without diseases of the thyroid gland. This amount was placed in 30 to 60 ml. of water and taken orally by the pa-

From the Hektoen Institute for Medical Research of the Cook County Hospital and the Isotope Laboratory, Mercy Hospital, Chicago.

The radioiodine was supplied and obtained on allocation from the Atomic Energy Commission, Oak Ridge, Tenn.

Figure 1. Geiger counter and scaling unit mounted on x-ray tube stand shown in use. The Geiger tube is in the lead cylinder above the patient's thyroid gland.

tient. An equal amount of radioiodine to be used as a standard was placed in a two ounce glass bottle almost full of water and tightly stoppered. The number of counts over the thyroid area was determined 24 hours after the tracer dose was given by placing the Geiger tube enclosed in a cylindrical lead shield 25 cm. distant from this point (*Figure 1*). This was then compared with a number of counts obtained from the standard at the same distance. The normal background for this Geiger counter is 35 counts per minute The percentage uptake by the thyroid gland was calculated as follows:

$$\frac{\text{Counts per minute over thyroid} - \text{background}}{\text{Counts per minute over standard} - \text{background}} \times 100 = \text{Percentage uptake}$$

At the distances and geometry employed, a one millicurie standard resulted in approximately 4000 counts per minute. Smaller amounts gave proportionally fewer counts. Various areas of the body other than the thyroid generally showed less than 10 percent of the amount concentrated in the gland. Since this is near the limit of accuracy of this method it was disregarded.

In 24 patients, the urinary excretion of administered radioiodine was determined. This was done by comparing the counts per minute in an aliquot of a 24 hour urine sample obtained after the tracer dose was given with the counts per minute obtained from a standard prepared to contain 0.0001 millicurie per ml.

In those cases selected for treatment with the exception of the carcinomas, an attempt was made to give that amount which would deposit 0.10 millicurie I^{131} per estimated gram of thyroid tissue. This amount would approximate 5000 roentgen-equivalents to the entire gland[15]. Each gland was classified according to size as one to four or more times normal (30-120 plus grams). The percentage uptake obtained from tracer studies was used to determine this dose as follows:

$$\text{Millicuries } I^{131} = \frac{0.10 \text{ (estimated weight of gland)}}{\text{(percentage uptake of gland)}} \times 100$$

In the few cases of carcinoma of the thyroid which were treated, an attempt was made to destroy the normal thyroid tissue first with 25-50 millicuries of I^{131} so that whatever radioiodine was subsequently administered would be concentrated by the carcinoma.

Counts were obtained over the thyroid at weekly intervals after administration of the

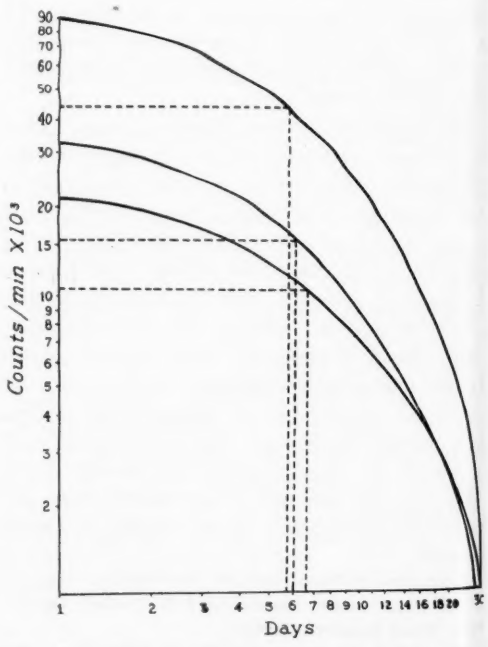

Figure 2. Biologic radioactive decay curves in three patients. The half-lives in these cases are 5.7 days, 6.0 days, and 6.7 days.

TABLE 1

Results of tracer studies of thyroid function with I^{131} in normal individuals and in patients with various disorders of the thyroid gland.

Diagnosis	Number of cases	Average percentage uptake by thyroid	Range of values
Toxic goiters	29	51.8	29.0-95.0
Euthyroid state	7	22.6	14.3-27.0
Myxedema	4	9.8	3.6-15.0
Non-toxic goiter	5	27.0	12.0-40.0
Carcinoma of the thyroid	9	25.8	13.0-32.0
Miscellaneous			
Chronic Nephritis	1	39.2	
Sulfonamide block	1	3.0	
Post-thyroiditis	1	15.0	
Post-total thyroidectomy	1	0.0	

radioiodine therapeutically. These counts were plotted logarithmically against the logarithm of the time in days. From this it was possible to calculate the biological half-life of the radioiodine. In three cases this was found to average six days in contrast to the physical half-life of eight days (*Figure 2*).

Results: A. Diagnostic. The uptake of radioiodine was found to range from 15 to 30 percent of the tracer dose with a mean of 22.6 in individuals with normal thyroid function; from 30 to 95 percent with a mean of 51.8 in the hyperthyroid state; and less than 15 percent in hypothyroidism (*Table 1*). The uptake in two of the five non-toxic goiters examined was over 30 percent. All of the nine cases of carcinoma of the thyroid examined showed normal or less than normal uptake and in two cases known metastases could not be demonstrated. In one case of chronic glomerulonephritis a considerable amount of radioiodine was found in the urinary protein. The uptake by the thyroid in this instance was 39.2 percent. One patient who had been taking sulfonamides showed only 3.0 percent uptake.

The urinary excretion of radioiodine in the first 24 hours after administration of tracer doses was less than 25 percent of the amount given in all cases of hyperthyroidism (*Table 2*). In persons with normal or low thyroid function the excretion was above 25 percent in all instances. When the urinary excretion was plotted against the uptake it was apparent that the values did not show a straight line relationship to one another (*Figure 3*). The reason for this was not apparent. Because of the marked variations in results the urinary excretion studies were discontinued.

TABLE 2

Urinary excretion of I^{131} in the first 24 hours after administration of tracer doses in various thyroid states.

Thyroid state	Average Percentage urinary excretion	Range of values
Euthyroid	37.1	27.0-53.2
Hyperthyroid	14.4	2.3-29.0
Hypothyroid	36.6	31.2-42.0

The following two case reports illustrate the value of radioiodine in the diagnostic study of thyroid function:

Case 1. M.S., a 63 year old Negress entered the hospital complaining of shortness of breath, weakness and swelling of the ankles for the past six months. She was found to have generalized enlargement of the heart, auricular fibrillation with a rapid rate, rales in both lung bases, ankle edema, and a smooth symmetrical enlargement of the thyroid gland. BMR's were plus 50%, plus 35% and plus 48%. The question arose as to whether the elevation of the BMR was due to hyperthyroidism or to cardiac failure. She was given a tracer dose of 0.10 millicurie I^{131}. The uptake by the thyroid gland was found to be 66 percent of this amount while the urinary excretion in the first 24 hours was 13.8 percent. She was subsequently given a therapeutic dose of radioiodine and after 12 weeks there had been a 19 pound weight gain, disappearance of

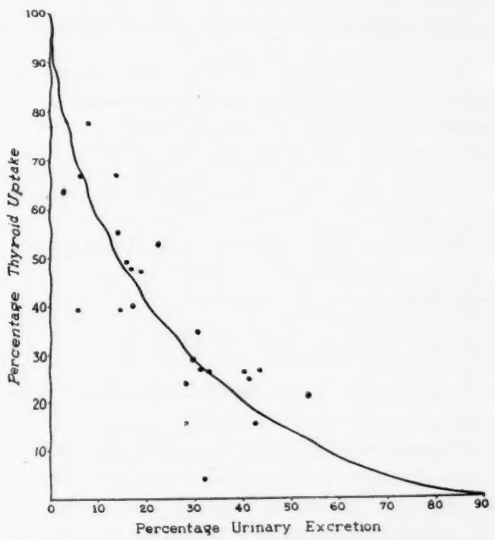

Figure 3. Relation between percentage urinary excretion of radioiodine and percentage thyroid uptake. The lack of linear correlation is apparent.

TABLE 3

Results of treatment of various diseases of the thyroid gland with radioiodine.

Diseases	Number of cases	Number of cases with recurrent goiters	Average percentage uptake I^{131}	Average therapeutic dose in mc.	Results
Diffuse toxic goiter	10	2	49.0	9.7	6 excellent 1 hypothyroid 3 repeated-good results
Nodular toxic goiter	11	7	48.1	9.1	8 excellent 2 died-other causes 1 repeated-good result
Diffuse non-toxic goiter	1	1	40.0	20.0	excellent
Carcinoma of the thyroid	3	3	27.1	113.0	uniformly poor

dyspnea, edema, and nervousness. The fibrillation persisted but the pulse rate was 72.

Case 2. S.F., a 54 year old white female entered the hospital complaining of dyspnea and nervousness of several years duration. She had a thyroidectomy eight years previously with only temporary amelioration of these symptoms. She was found to have tacchycardia, rales in both lung bases, and ankle edema. The thyroid gland was not palpable. Several BMR's were in the vicinity of plus 35%, while the blood cholesterol was 316 mg. per 100 ml. She was given 1.0 millicurie I^{131}. The uptake by the thyroid gland was found to be 17.7 percent, in the lower level of the normal range. The signs and symptoms were relieved by control of the cardiac failure.

These two cases presented very similar findings yet in the first the cardiac failure was due to hyperthyroidism and disappeared after adequate therapy. In the second case the cardiac failure was due to a primary disease of the heart and the elevation of the BMR was due to cardiac failure.

B. Therapeutic. Ten patients with diffuse toxic goiters were treated with radioiodine (*Table 3*). The results were excellent in six with disappearance of symptoms and marked shrinkage of the goiter. In three other patients a second dose of radioiodine had to be given to achieve the same results. In one case a mild hypothyroidism resulted. Eleven patients with nodular toxic goiters were treated. Seven of these were recurrent one or more times after surgery. Excellent results were obtained in eight with almost complete disappearance of the nodular gland in almost all instances. One patient had to be retreated. Two patients in this group expired, one after three weeks because of myocardial failure and one after eight weeks because of chronic pulmonary disease. In the second case, necropsy revealed only a firm bit of fibrous tissue with a few colloid-poor acini where a palpable nodular gland had been (*Figure 4*).

Figure 4. Section of thyroid obtained at necropsy eight weeks after radioiodine therapy. Note the fibrosis, the small amount of colloid, the absence of lymphoid elements, and the marked thickening of the arterial wall.

A typical example of this group is as follows:

Case 3. M.P., a 27 year old white female entered the hospital complaining of palipitation, nervousness, weight loss, and pain in the chest. She had a partial thyroidectomy one year previously with relief of these symptoms for two months. Since then she noted progressive enlargement of the thyroid, increasing exophthalmos, tremor and palpitation. She was found to be extremely tense and irritable with a fine tremor, marked exophthalmos, a pulse rate of 120 per minute and with a thyroid enlarged to twice normal size. BMR's had been over 100% at times. The blood cholesterol was 135 mg. per 100 ml. She was given 1.0 millicurie I^{131} and the uptake by the thyroid gland was 91.1 percent. She was given an additional 7.0 millicuries of I^{131}. Within two weeks she had gained six pounds and the taachycardia had dissappeared. After six weeks the gland was barely palpable and the patient had no symptoms referable to the hyperthyroidism. There was no change in the exophthalmos at first but gradually it began to regress. It had not yet completely disappeared when the patient was last seen one year after treatment.

One patient with a recurrent non-toxic goiter was also treated because of the relatively high uptake of radioiodine. A report of this case follows:

Case 4. D.T., a 28 year old female was first seen complaining of a mass in the neck which had been present since birth. One year prior to this examination the mass was excised and found to be a hyperplastic thyroid gland with no evidence of malignancy. On examination a diffusely enlarged thyroid gland four times normal size was found. There were no signs of toxicity and the BMR's were between plus and minus 5%. She was given 1.0 millicurie I^{131} and the uptake by the thyroid was found to be 40.0 percent. Because the patient wished to achieve cosmetic improvement without further surgery, it was decided to give her 20 millicuries of I^{131}. Within six weeks the gland had almost entirely disappeared. Three months after the therapeutic dose, there were only firm almond-sized lateral lobes palpable although the patient had no signs or symptoms of hypothyroidism.

Three cases of carcinoma of the thyroid were treated with uniformly poor results. The chief difficulty was that the tumor tissue in these patients was unable to concentrate and retain the radioiodine.

Discussion: Many methods have been devised for evaluating thyroid function. The most widely used, the basal metabolic rate, is an indirect measure of this at best and is fraught with many sources of error, in spite of its simplicity. Studies of iodine levels in blood are too complex for routine clinical use and other blood chemical findings such as the cholesterol level are not well enough correlated to be of great value. Radioiodine, by virtue of its unstable nature, and because it is concentrated and handled by the thyroid gland in the same fashion as the naturally occurring form of the element is ideal for the study of normal and disordered thyroid function. Several approaches to the problem are available. These consist of various studies of the concentrating ability for iodine of the thyroid gland as measured by external survey [16, 17], that rate at which iodine appears in the blood stream organically bound [18, 19], and the amount of iodine excreted in the urine[20, 21, 22]. Each method has its particular merits and disadvantages. However, the simplest by far and the one which will lend itself best to routine clinical use as an ambulatory procedure is the determination of the percentage uptake by external survey. The usefulness of the method is further shown by the ease with which therapeutic doses may be estimated.

With this simplified diagnostic tool, a similarly simplified therapeutic procedure has become available for use in clinical medicine. Early in the use of radioiodine for the treatment of hyperthyroidism it was advised that the material be given only to those over the age of 50, and preferably to those in whom at least a biopsy of the goiter had been obtained. These precautions are now felt to be largely unnecessary[23]. The amount of irradiation the gonads receive during the course of radioiodine treatment of hyperthyroidism is quite small[24] because of the distance of the chief source, the thyroid, and the short time the iodine remains in the urinary tract or gastrointestinal tract, the only other sites of appreciable concentration[25]. Also treatment of diffuse or nodular toxic goiters now seems logical and practical without biopsies. Solitary toxic adenomas can be treated and apparently destroyed. Solitary non-toxic adenomas are not suitable for treatment. The danger of malignancy renders surgery imperative in these instances[26]. Apparently there are very few carcinomas which have an uptake of radioiodine in the range of the toxic goiters. This especially true when this number is compared to the number of non-malignant toxic goiters that are seen[27].

The treatment of hyperthyroidism with radioiodine is ideal from the point of view of the patient. No lengthy preparatory period is

necessary, no surgery is involved, no prolonged hospital stay is necessary, and in milder cases, the patient is ambulatory[28]. Results become apparent after two weeks and the final result can be seen in six weeks to three months. Side reactions are negligible even in those patients very sensitive to iodine. No changes in the blood counts were noted. Transient swelling and tenderness of the thyroid are said to occur after the first week [29] and this was seen occasionally in this series. At this time there may be some increase in the symptoms of the thyrotoxicosis and therefore in severe cases Lugol's solution is administered for one week beginning on the third day post-therapy[30]. This is also advisable especially in the severe cases to obtain symptomatic relief more quickly. The incidence of hypothyroidism was less than ten percent in 347 cases reviewed[31]. In the present series it was seen only once (4%). Although several patients had to be retreated once, none needed a third dose and all the patients were considerably improved after the first treatment.

The results of this method of therapy are most striking in patients with thyrotoxic heart disease. It is extremely gratifying and dramatic to see a patient in cardiac failure with auricular fibrillation within six weeks after treatment up and about with perfect ease with a normal sinus rhythm. This enthusiasm has been dampened only by the pessimistic outlook that is present in the treatment of thyroid carcinoma. Few of the carcinoma cells have an affinity for radioiodine and even this may be present for a while only and then those functioning cells may lose their ability to concentrate the material[32]. The use of tracer studies continues in the search for those cases that may have sufficient concentrating ability in the tumor to make therapeutic attempts worthwhile[25]. It appears that whereas radioiodine will replace surgery as the method of choice for the treatment of hyperthyroidism, radical surgery and conventional irradiation remain the treatment for carcinoma of the thyroid.

SUMMARY

Tracer studies of thyroid function using radioiodine were obtained in 58 patients using a simplified method of external survey. The average percentage uptake was 9.8 in patients with hypothyroidism, 22.6 in those with normal thyroid function, and 51.8 in those with hyperthyroidism. In general and uptake of greater than 30 percent indicated hyperthyroidism.

Radioiodine was given to 25 patients for the treatment of various diseases of the thyroid gland. Excellent results were obtained in the treatment of 18 out of 21 cases of toxic goiters. One case of hypothyroidism developed in this series. One case of non-toxic goiter responded well to treatment. None of the three cases of carcinoma of the thyroid treated showed any improvement.

The use of radioiodine for diagnosis of the status of thyroid function is a simple procedure easily adapted for routine clinical use. The use of radioiodine may well become the treatment of choice for hyperthyroidism.

ADDENDUM

Since the writing of this paper we have been using a new bismuth-plated cathode Geiger tube made by Radiation Counter Laboratories, Chicago. The bismuth makes the tube about five times as sensitive to the iodine gamma radiation and by using it as we had the older tube, we have increased counting rates over twelve times. Now we obtain 50,000 counts per millicurie. This has enabled us to cut the size of the tracer dose to between 0.05 and 0.10 millicuries.

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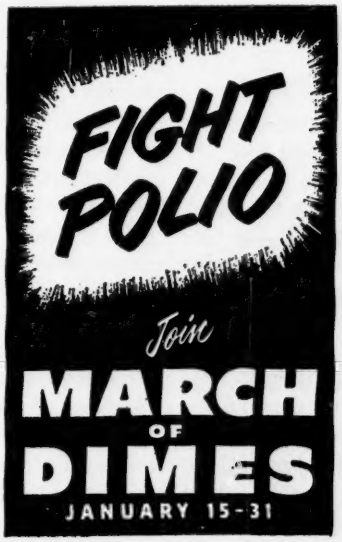

The Function of the Radiologist

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The practice of roentgenology, one of the youngest branches in the field of modern medical specialization, is quite different in many of its aspects from other recognized specialties. It was conceived with the invention of the x-ray machine. At first the use of the machine was limited to the study of simple anatomical aberrations. Only a fundamental knowledge of anatomy and pathology was essential. In the course of time the machine was relegated to a less important role, since the application of medical knowledge developed standards of criteria for more accurate diagnosis. In summary, the roentgenologist by virtue of his training minimizes the importance of the machinery and emphasizes the coordination of anatomy, pathology, and clinical history in interpreting the film.

The Status of the Radiologist.—The training of the specialist in medicine generally includes the study of x-ray in the chosen field. For example, the urologist claims he can interpret as ably as the radiologist intravenous and retrograde pyelography films; the gastroenterologist, gastrointestinal films; the oto-laryngologist, sinus films; the specialist in tuberculosis, chest films; and the orthopedist, bone films. Assuming all this were true, what is there left for the roentgenologist?

By far the greater satisfaction comes in correlating the films in a particular series. A knowledge of x-ray interpretation limited to only one field or phase of x-ray is dangerous by its implication of exclusiveness. Disease does not follow our man-made arbitrary divisions. If the specialist would go farther afield in his knowledge of x-ray, then he is just beginning to enter the vast panorama of varied radiological findings. Consider this case as a point of illustration: an elderly man, complaining of loss of weight, constant irritable cough, occasional episodes of dyspnoea, poor appetite and anemia, reports to the local cancer clinic for localization of the tumor. A chest film is taken. A sharply defined convex tumor mass is found in the right cardiophrenic angle. It does not pulsate on fluoroscopy. The leaf of the right diaphragm shows a poor excursion. Would our chest men dare to commit themselves to a presumptive diagnosis? Who is to undertake the responsibility of "choosing" the diagnosis? This is the routine case for the roentgenologist. Further fluoroscopy of an adjacent system is indicated: i.e., gastrointestinal series. The esophagus then shows a large portion of the cardiac end of the stomach herniated through the esophageal hiatus. The correlation of systems, the ability to interpret x-ray films beyond the specific limitation of one field measures the true value of the roentgenologist's worth. A little learning is a dangerous thing.

Other illustrations easily come to mind. A urologist studying a pyelographic film overlooked an osteoblastic metastasis in the lumbar spine; an obstetrician looking at a routine scout film of the abdomen missed a large cystic area in the pubic bone; a chest man failed to observe an irregular shadow in the gas bubble of the stomach which proved susequently to be an early carcinoma of the cardiac end of the stomach. Any radiologist can parallel these illustrations culled from his own experiences with other competent specialists.

When a radiologist is employed in the smaller hospital, which is located in small or medium-size town, there frequently may be no recognized specialist in specific fields, no orthopedist, or cardiologist, or urologist, or gastroenterologist. Here the radiologist has the full responsibility for diagnosing the disease processes of these respective fields. Wherever a specific specialist is absent, the contribution of the radiologist is proportionately increased. For here he dons the cloak of the missing specialist. This situation is commonplace throughout the states, with the exception of the large medical centers and in the big cities.

In addition, instances come to mind where specialists consult the radiologist for solution to specific problems. Thus the pediatrician relies upon the radiologist's diagnosis of a child's chest

condition, such as in atelectasis, rather than calling upon a chest specialist; the surgeon, suspecting bowel obstruction, utilizes the skill of the radiologist to develop the diagnosis. The radiological diagnosis of acute abdomen is being fully studied and utilized by radiologists as a group.

It is not known generally that the radiologist's responsibility goes beyond the mere diagnosis of *cases. The referring physician often asks for an* evaluation of the findings. What is the significance of a negative gall bladder in the presence of positive clinical findings? Consider the significance of negative findings in a case of *sacro-iliac or sciatic pain. That is a chapter in itself.* What is the significance of negative x-ray *findings in a gastro-intestinal series with a history* of hematemesis? How long does it take a *fractured skull to heal? Does fluoroscopy demon-*strate callous formation? Does virus pneumonia give a characteristic x-ray sign? Can a slipped intervertebral disc be recognized on a flat film of the spine?

Professional Relationships.—The relationship of the radiologist to the patient is completely different from the relationship of other physicians, including both specialists and general practitioners, to that same patient. The ideal, historical exemplary attitude of trust and confidence by the patient in his physician is by no means deprecated, even in this age of highly organized laboratory procedures and mechanistic approach. This reciprocal personal understanding exists, to a greater degree between the patient and his family doctor; and to a lesser extent with specialists whom the patient sees rarely or only upon consultation. With the diagnostic roentgenologist it occurs rarely. Those interested in the immediate psychological contact with the patient may find this depressing. For the radiologist, however, this phase of medicine is not considered significant. The patient is sent to the radiologist for the elicitation of certain objective findings. He finds subtle and ample satisfaction in accomplishing the specific task with which he is charged. The more definitive the diagnosis, the more deductive the processes by which the diagnosis is made, the greater the reward. The satisfaction for the radiologist in doing the job well is based on imparting valuable information to the referring physician which ultimately benefits the patient. In the field of radiology the accent is not on the direct personal relationship, but on the discovery and evaluation of objective findings, as accurately as possible.

This impersonal status permits the radiologist to enjoy an enviable lack of bias, and oddly enough, is of benefit to the referring physician and of value to the patient. Who but the radiologist can impart a diagnosis with such complete *impartiality? What fearful and disruptive con-*sequences many diagnoses bring: metastatic carcinoma of the spine, or pelvis, carcinoma of the lung, carcinoma of the stomach, depressed comminuted fracture of the skull, congenital anomalies in infants, tuberculosis with cavitations. The determination of these catastrophis illnesses *so terrify the referring physician that he fre-*quently is unable to impart the information to *the patient, and hides behind a veil of euphe-*misms.

The value of confirmation is another facet of the radiologist's contribution. The physician has made a clinical diagnosis of a condition; the radiologist impartially and independently arrives at the same diagnosis, thus reinforcing the doctor's diagnosis. The specialist, in reviewing x-ray films in his own field, brings to his search for a diagnosis a preconceived opinion based on his previous examination of the patient. Unlike the radiologist's impartiality, he tends to use the x-ray to confirm the clinical diagnosis.

In the application of radiation to disease processes, the role of the radiologist in this field is so pre-eminent as scarcely to merit discussion, with the exception of the dermatologist employing superficial therapy.

Educational Contribution.—The student receives only a fleeting impression of the significance of x-ray work in its application to the general practice of medicine. In his internship his acquaintanceship is somewhat expanded, for he has a greater responsibility in following the cases through from hospital admission to the discharge of the patient. The radiologist in the hospital is in a position to present to the interne by informal discussions a series of similar cases, to show all the variations in the disease processes, as in different types of filling defects in the gastro-intestinal tract, the manifold variations of pneumonic lesions in the chest, the different types of tuberculous infiltrates, etc. By these means the interne obtains an increasing awareness of

just what function the x-ray plays in the diagnosis of the disease. He learns its limitations and its potentialities.

The resident has greater opportunity to increase this area of knowledge by his longer stay in the institution, for residents in every specialty must learn much of x-ray, to guide them properly in their chosen fields. Whose responsibility is it to teach these men the x-ray application, if not the radiologist's. Here the radiologist serves an essential function.

Hospital Management.—A very obvious aspect of the radiologist's responsibility is the sheer physical feat of managing the hospital x-ray department. This is taken so for granted, and rightly so, that it is never mentioned in any scientific discussion. Consider the x-ray department: thousands of people enter it annually for various examinations. In pursuance of these examinations, x-rays are taken, for which technicians must be trained, supervised and directed, and standards maintained; films must be ordered, reports on each examination must be studied, reviewed, dictated, signed, and submitted to the referring physician promptly. Duplicate records must enter the hospital files. In many instances a more immediate follow-up by telephone communication must be made to the doctor. Requests from attending staff for a file of cases on a specific subject must be gathered. This daily routine must be handled so effortlessly that neither patients nor consulting doctors are unduly aware of the mechanics involved. Each radiologist works out a routine of scheduling cases according to the abilities of his technicians and the type of machines at his disposal.

In the purchase of new x-ray machines and equipment, which usually involves vast sums of money, the opinion of the radiologist is paramount, for he is the one man in the medical field, best equipped by training and knowledge, to determine the type of machine needed for the demands of the hospital. Likewise, in new or remodelling hospital construction, who else is similarly qualified to determine the best functional lay-out for an efficient x-ray department? Granted that the x-ray companies are eager to suggest designs and to sell machines, it is the duty of the radiologist to decide which features should be added, omitted or modified to conform to the demands and needs of his community.

This article touches upon only the more obvious aspects of this topic; additional features will readily come to the minds of interested readers. An excellent analysis of the radiologist's function has been made by Vice-Admiral Ross T. McIntyre, formerly Surgeon General, U. S. Navy. It is a pleasure to quote these words by a non-radiologist, certainly an impartial observer:

"Radiology is, of all the specialties, the one perhaps most nearly related to every other field of medicine. It is often the magic key in diagnosis. It is essential to the internist and the surgeon, the ophthalmologist, the obstetrician, and the general practitioner. All are dependent upon the accurate interpretation of the x-ray films, and no other specialty is so necessary in all branches of medical practice. There is perhaps less isolationism in the field of radiology than in any other branch of medicine."

The foregoing points constitute a resume of the radiologist's services and functions in modern medical and hospital organization .

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Halfway Through

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It is a most difficult task to give an objective and dispassionate account of the progress of surgery during the first half of this Twentieth Century. It is more difficult because I have lived in it and been a part of it. Proximity frequently distorts one's perspective; and events and personalities seem to pass in review like the images on an old magic lantern. Some reflections are clear cut and vivid while others are ill-defined and hazy. They are often distorted by the view of the recorder and the focus of the illuminator.

In spite of the interruption of our progress by two world wars and a confused struggle to avoid a third, we have made more progress in these fifty years than were made in the previous two hundred — truly a Golden Age in Surgery, a time greatly enriched by many splendid adventures into science.

When I began my preparation for a surgical career, this century was in its first decade; progress in many fields was definitely on the march. The first indoor automobile show was held in Chicago's Grant Park in 1910 and the next year an aeroplane exhibition was thrilling the same crowds. Moving pictures were still very shaky, talking pictures were inarticulate and radio and television had not yet wrecked the study hours of our children.

In the early nineteen hundreds, Listerism had been replaced by aseptic surgery. Berlin, London, and Vienna were the great centers of surgical teaching and we, younger men, were streaming to the old world for our post-graduate study. In the United States, great clinics were growing up in Baltimore, Philadelphia and New York. However, it wasn't long before the Middle West began to attract its share of attention. The Mayo Clinic was bringing Rochester, Minnesota into prominence and Christian Fenger in the Cook County Hospital carried on investigations in surgical pathology which had been popularized by Samuel D. Gross in Philadelphia. Fenger's tireless study of gallbladder disease, urinary tract, and pelvic diseases influenced many of the men who came to his clinics. Surgical pathology soon took its place beside anatomy as a "must" subject for the trained surgeon. Today Illinois can boast one of the greatest medical and surgical centers the world has to offer.

Our advances have come almost uniformly through the work of individuals but this brief record cannot pay tribute to all those to whom so much is due. It is possible only to mention some important events that influenced our thinking in Illinois during the period about which we are speaking. I have in mind the American Medical Journal; the Archives of Surgery; Surgery, Gynecology and Obstetrics; the American College of Surgeons and the International College of Surgeons; these had their birth in Illinois during this half century.

The human race is centuries old but scientific surgery is still very young. The technical achievements of surgery can never grow as science can because technical proficiency dies with the surgeon while the results of scientific progress can be handed on to the next generation like the baton in a relay race. It is difficult to sketch the contributions of science to the practice of surgery during this half century. Our semantic limitations have led us to select the term "surgical physiology" to cover the adaptations of biophysics, biochemistry, electronics, enzymatic chemistry and hormonal chemistry to our surgical uses. As our knowledge increases many diseases will cease to be treated by surgery but there will remain many defects which will require the surgeon's attention.

Today we are performing operations which no one would have dared to attempt twenty years ago — not because surgeons are more dexterous but because patients are better able to withstand operations. Operations that would have been doomed to failure before the development of our

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present methods of pre and post-operative care, are now everyday accomplishments.

In 1937 America's first blood bank was set up at Cook County Hospital and served as a pattern for hundreds of similar banks that soon followed. Its great importance can better be understood by looking at a specific hospital's records. During 1949 in Wesley Memorial Hospital in Chicago, 2800 pints of whole blood were drawn from donors and given to patients. During the same year 28,000 pints of other life sustaining fluids were given intravenously to patients whose blood deficiencies were a handicap to their recovery.

Surgery has made great progress since the discovery and controlled use of the bacteriostatics and antibiotics. Imagination can hardly cope with the dramatic results which have become daily experiences. Appendicitis which annually exacted its toll of deaths has now been reduced in mortality to less than one fifth of what it was ten years ago. Large bowel surgery has lost many if its limitations because we can now practically render the tract sterile. With the danger of infection removed, the surgeon has only to be a good technician. Post-operative pneumonias are seldom met, and if they do occur, antibiotics and bacteriostatics readily control them. We still have the massive lung collapses and atelectases as occasional complications, but the improved anesthesias and anaethetic agents have lessened their frequency.

The sudden death of a patient after an operation may come from an embolus which blocks the pulmonary artery. These unpredictable calamities are difficult to avert but we are making every effort to eliminate the factors which favor their occurrence.

In the time that is allo'ed to me there is little left to pay tribute to the surgeons of Illinois who have contributed to the progress of surgery in this past half century; surgeons who were great even among the greatest. Senn's illuminating researches on intestinal injuries and his bold dexterous surgery made his clinic a very attractive one for the visiting surgeon. Murphy was a common name but an uncommon man. His knowledge and ability coupled with a dynamic personality made him a great teacher and lecturer. His contributions to surgery can be recalled by all of us. Ochsner was not a great lecturer but he developed a great clinic during his lifetime. McArthur and Kanavel were men who made progress and left their imprints on the surgery of our time. If I were to speak of those who are still working, there would be no end to the list.

In recalling some of the great surgeons of the past and contributors to our progress in surgery, I am trying to rationalize the trend which surgery is now showing. There is an ever increasing tendency to specialization. Hand in hand with this tendency to superspecialization, there is growing an increasing number of self-appointed, self-perpetuating accreditative boards. This is having a definite effect upon the surgical profession and I seriously question that this effect is entirely favorable. These specialty boards have a great influence on hospital committees which set up the standards for staff membership. They must not become so short sighted that they compel young men to cast their lot with a restricted specialty before they have had an opportunity to survey the entire field of surgery and before they can possibly know what their personal attributes would best suit them to undertake. One is reminded of the similarity to the old world custom of making matrimonial alliances between young people before they were conscious of the opposite sex's charm and even before the biologic urge of the mating impulse was felt. The surgical profession should not follow this custom.

One cannot overlook the good that has been accomplished by raising the standards for those who practice surgery. We are likewise grateful for the careful scrutiny of the boards and committees which have improved the standards of our workshop — the hospital. We are, however, nearing the saturation level of accreditative boards and we should avoid a topheavy bureaucratic hierarchy which is foreign to our democratic concepts. What we are most concerned about is the overall service to the people of our communities. We must continue to give this nation the finest and most complete medical and surgical service that any country in the world has ever enjoyed. It will profit our profession very little if we impose too great restrictions on our young doctors and thus limit our ranks to the few aristocrats who can afford the costly years of non-remunerative training demanded by overzealous qualifying boards.

Nothing that we have done individually or as

a society has been as flattering to our profession as the attitude of the government at this time. The political leaders have come to realize almost precipitously that a healthy nation is a strong and productive nation. Success in preserving and fostering the health of our people would have great rewards if it could be made to appear that it was guided by a politically allied hand. It might help some obscure politicos to gain a respectable place in our nation's welfare. If we are short of doctors, hospitals and nurses as President Truman suggested in his speech on January 5, 1950, then we should recognize our weaknesses and correct them. However, we have more doctors per capita than any other nation in the world except Israel. There the situation is only temporary because it is the result of an influx of refugee doctors from all over Europe. If we were as short on doctors as the Government is long on potatoes and eggs, there would indeed be a need for some medical dictator who could be appointed through political patronage.

Our progress in surgery during the past fifty years is surprising even to us. We will have to readjust our surgical teachings and concepts as our knowledge of the causes of surgical diseases increases. We are conscious of the successes which are being made against disease and we can measure the benefits to mankind in longer years of healthful productive life. Our progress is outstripping the programs of the social scientists. We must readjust rapidly to plan for the top heavy old age group, growing much more rapidly than we planned.

Geriatric surgery will grow so rapidly that soon we shall have a specialty board in this branch of surgery. Life may begin at forty but more and more people are going to enjoy it after seventy. We are half way through this century of surgical progress and we can be exceedingly proud of all that has been accomplished but like the famous circus our achievements must grow bigger and better each year.

The future looks very bright if we can avoid the restrictions and chaotic conditions which might be produced by some unhappy form of socialized medicine. The next fifty years can make even greaters contributions than we have already had.

We hope that progress in pure science, from which much is expected, shall be devoted to the welfare of the world and its citizens rather than to the destruction of the things we have built and the lives of our people.

PROTEINS IN FOOD

The conception that the proteins contained in different foods differ greatly in nutritive value is of comparatively recent origin. Until the end of the last century investigators in the field of nutrition recognized the importance in diet of sufficient amounts of proximate principles: carbohydrates, fats, minerals, and proteins. The protein was, however, just protein and represented merely the nitrogenous element in the food. The realization that different foods contained proteins possessed of different nutritive or "biological" values was derived largely from the efforts of Max Rubner in Berlin, and his then assistant, Karl Thomas. By means of nitrogen balance tests upon himself, Thomas (1909) showed the differing capacity of proteins in different foods to replace the daily nitrogen expenditure of the body due to wear and tear of the tissues. The more important of the proteins thus tested were placed by Thomas in the following series of descending values: beef, milk, fish, rice, potatoes, oats, peas, white meat, flour, maize. With one or two exceptions this order has been confirmed by subsequent investigators. *Excerpt: Supplementary Nutritive Values Between the Proteins of Some Common Foods, Harriette Chick, D.B.E., D.Sc., London, J.A.M.W.A., Nov. 1950.*

Is Rheumatic Fever A Preventable Disease?

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Dr. McCulloch: I would like to begin the discussion of the topic of the present status of rheumatic fever therapies by answering the question which you have asked: rheumatic fever today is not a preventable disease.

In order to prevent disease we must understand its etiology clearly. The understanding of the etiology of rheumatic fever, however, is still "around the corner". Several ideas prevail and are emphasized to various degrees in various quarters. Of these, the most important ones are:

(1) Streptococcal infections.
(2) Growth.
(3) Emotion.
(4) Stress.
(5) Nutritional deficiency.
(6) Allergy.
(7) Heredity.

I shall briefly discuss each of the factors mentioned.

(1) Epidemiologic, clinical, and experimental evidence points towards the streptococcus as a major factor in the etiology of rheumatic fever. Usually a nasopharyngeal infection is followed by an acute attack of rheumatic fever after a latent period of varying duration. In many authentic cases, however, it has been impossible to demonstrate a streptococcal infection preceding the acute attack.

(2) Young people are especially susceptible and the chances of suffering a first attack of rheumatic fever diminish with advancing age. The chances are almost negligible after thirty years of age.

(3) Emotional conflicts have been incriminated as precipitating factors in acute rheumatic fever. It is true that some cases are suggestive of emotional involvement but they are rare.

(4) It appears possible that the factors 1, 2 and 3 — infection, growth, and emotional status — form a matrix which develops the clinical picture of rheumatic fever under the impact of stress. This, however, has the inter-relation of all of these factors.

(5) The role of nutrition in the etiology of rheumatic fever is ambiguous. Again, nutritional factors might be part of other factors previously mentioned. The incidence of rheumatic fever in war areas declined during the period when food supply was low and after a normal supply had been re-established; this, of course, cannot be regarded as conclusive evidence.

(6) Patients suffering from rheumatic fever appear to have a higher incidence of allergic manifestations in their personal or family history. Furthermore, it appears that a patient suffering from rheumatic fever has an altered reactivity of his tissues to various proteins.

(7) The significance of heredity in rheumatic fever is questionable and while important work has been done in the field its significance remains to be established.

To me, the word "prevention" implies a direct method of protecting the individual against a disease. The prevention of smallpox by vaccination is a good example of this concept. Our present thinking and our management of rheumatic fever deals with "control" rather than with prevention. Control should be directed towards all possible etiologic factors: if properly executed it lessens demonstrably the morbidity and mortality due to the disease.

At present three approaches to the problem

of the control of rheumatic fever predominate. First, the prevention of initial attacks of rheumatic fever in spite of the absence of more adequate knowledge concerning its etiology; our principle concern in this respect is the reduction in the number of infections of the upper respiratory tract by health education particularly concerning oral hygiene, adequate nutrition, proper medical care and the judicious administration of chemotherapeutic and antibiotic agents. Enforcement of this approach has produced a definite reduction in the morbidity of rheumatic fever during the past ten years.

Second, the prevention of subsequent episodes in patients who have already suffered from previous attacks. Again the elimination of upper respiratory infection by increase in a maintenance of the patient's resistance and by vigorous use of sulfa drugs or penicillin are the essential weapons available to us.

Third, the eradication of sources of infection within family units or communities in which the disease prevails. This task — the supervision of children and adolescents and the education of their parents rests, of course, largely with the family physician.

Each of the factors which I have mentioned is at present subject to close scrutiny and experimental investigation. The importance of heredity, for instance, is being studied by the New York Heart Association who follows four thousand sets of indentical twins. As yet no conclusive results have been reported.

In summary then I feel that rheumatic fever is not preventable at the present time but that it is controllable provided we make concerted efforts to control it.

Dr. Harry F. Dowling: Professor of Preventive Medicine, University of Illinois. In my reading I noticed two schools of thought regarding the efficacy of penicillin in lowering the incidence of rheumatic fever following streptococcus infection. Ramelkamp and others have committed themselves strongly in favor of penicillin whereas Weinstein feels that the results are not significant. How do you feel about these opposing views?

Dr. McCulloch: I am familiar with several studies using sulfadiazine and or penicillin which have been well controlled. Most of these studies agree with those of Ramelkamp, namely, that these drugs are of definite prophylactic value. I am inclined to agree.

Dr. L. A. Selverstone: Instructor of Medicine. I would like to ask two unrelated questions — first, are there any damageable changes in the nutritional status of the child who suffers from his first attack of rheumatic fever? and second, does your experience coincide with Taussig who believes that congenital heart disease pre-disposes to rheumatic fever?

Dr. McCulloch: The child who develops rheumatic fever may be underweight, overweight, or within the normal range. Most of the children as a matter of fact appear to be overweight. But weight of course it not necessarily an index of optimal nutrition. As for the second question, my own experience with congenital heart disease is not sufficient to answer it with any degree of certainty.

Dr. Robert L. Grissom: Assistant Professor of Medicine, University of Illinois. Have you seen untoward effects of the sulfadiazine prophylaxis?

Dr. McCulloch: No, we have not seen any. Actually we are now following one hundred fifty patients and are so confident of the innocuousness of the procedure that after an initial period of observation we have dispensed with any routine laboratory studies during the periods of administration.

Dr. Ford K. Hick: Professor of Medicine, University of Illinois. What is your dosage schedule?

Dr. McCulloch: Before we place a child on prophylactic sulfadiazine he must satisfy four criteria: first, he must have at least two attacks of rheumatic fever or must have clinical signs of heart disease; second, the family must be cooperative and willing to maintain prophylaxis for two or more years; third, he must have a reasonably clear nasopharynx; and fourth, other children in the family must be examined and nasopharyngeal defects corrected. For children under ten years of age we give .25 grams every 12 hours. For children over ten years of age give .5 grams every 12 hours. This is given continuously until the conclusion of the second spring season following onset of rheumatic fever. If a respiratory infection develops sulfadiazine is discon'inued. The physician would then use penicillin during the respiratory infection. No treatment is given during the latent phase. Sul-

fadiazine is again restarted at least three weeks after the respiratory infection at the same dosage level provided there is no recurrence of rheumatic fever. If the four criteria are not met sulfadiazine is not given, but we feel that penicillin should be administered during any acute respiratory infections within the group.

Dr. Hick: Are you assuming that streptococci are the only responsible organisms?

Dr. McCulloch: I hesitate to answer this question because my answer would be based on institutional studies which are not comparable to conditions encountered in general medical practice.

Dr. E. Philipp: New Zealand, Guest of the Seminar. In Wellington, New Zealand, a district in which nutrition is satisfactory, we do not see much rheumatic fever under ordinary circumstances. Last year however, a new strain of streptococci was imported and resulted in a violent epidemic of upper respiratory infections. Several months later an epidemic of rheumatic fever followed. In this case the organism appeared to be the important factor and nutrition did not seem to be of any significance.

Dr. McCulloch: In summary I shall reiterate that we are unable so far to prevent one phase of rheumatic fever — the first attack. We are however able to reduce the number of recurrent attacks at least by one-half. Thus the disease, though not preventable, is at least in part controllable and I feel that the future is full of hope.

Benign Tumefactions of the Breast

(Benign Changes Simulating Tumor)

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The purpose of this discussion is to outline certain pathological and borderline physiological conditions of the breast which have been inexplicably named chronic cystic mastitis at one time or another.

We shall try to separate them for their better understanding, realizing at the same time that it is possible, even usual, for more than one type of change to be present in the same breast. *It is to be emphasized at the outset that breast* tissue, like any other tissue, is not affected uniformly by pathological changes, but if anything, the changes are less uniform than usual, frequently giving rise to puzzling pathological pictures. In the instance of this tissue even the normal physiological changes are not uniform, nor is there much general concurrence in the anatomy of the normal cyclic changes.[11, 13, 14, 15]

From the numerous studies made the following are fairly constant normal findings. The tissues of the breast enter into two fairly distinct but very overlapping phases, the menstrual phase, lasting from about one week before menses to two or three days after menses, and the intervening period known as the intermenstrual phase. *During the menstrual phase there is increasing* enlargement and vascularity of the breast, and variable darkening of the areolae. Microscopically there is an increase in loose intralobular connective tissue, the cells of which are fusiform and stellate, giving a myxomatous appearance. This tissue occurs about the acini and lobular tubules and is quite well demarcated from the denser interlobular connective tissue by its looseness, a relative basophilic appearance and the course of the fibers. With the onset of the intermenstrual phase, the breasts decrease in size.

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the myxomatous connective tissue becomes more compact and assumes an acidophilic staining reaction. Changes in the epithelial structures are described, but are not constant for any phase, nor throughout any one specimen. It is felt that many mistakenly assume that there is a constancy.

The possibility of cyclic changes in the epithelium may be admitted only if it can also be assumed that there is a markedly varied susceptibility of individual lobules to the stimulus and also that the intermenstrual regressive changes are varied.

The lobule is outlined by specific connective tissue as noted and may even be discerned in marked regression of the breast. The acini are lined by a single layer of cuboidal cells with a hyaline basement membrane, and surrounded further by a single layer of long fusiform cells, often having the appearance of smooth muscle. The number of acini per lobule during active sexual life is extremely varied. Before the acini are fully developed, they occur as buds, small compact masses of cells, which also are frequently seen during the intermenstruum. There are several tubules (ductules, canaliculi) in each lobule which connect the acini to the smallest ducts. These are of the same or slightly smaller diameter than the acini, and the cellular composition is similar. Occasionally a second layer of flattened parietal cells is seen in the tubules. The ducts are lined by columnar cells of moderate height, and a second layer of flattened or polygonal cells. Tangential cutting may give the false appearance of hyperplasia. The basement membrane is distinct and surrounded by one or more layers of flattened cells sometimes resembling smooth muscle (myoepithelium).

Secretory changes take place in the acini, tubules and small ducts, the cells becoming more pale and producing coarse vacuoles. The nucleus is enlarged and a distinct nucleolus is seen. Lumens will contain a pink homogeneous material and a few round colostrum cells. Certain changes occur in these structures, just mentioned, to give rise to the pathologic changes to be discussed.

1. *Enlargement of the pre-menstrual type.* This is most commonly called mastodynia, symptom, so named, it is presumed, because the morphologic changes are usually more obscure than the clinical changes. This condition is complained of most frequently during the pre-menstrual and menstrual phases, though this is not necessarily so. Medical attention is usually sought because of the pain, discomfort, fullness, or persistent enlargement. It occurs most frequently after full sexual maturity during the third and early fourth decades often in well-developed women with apparently well-developed breasts. Most of these patients have histories of endocrine difficulties with shortened, frequently painful menstrual periods and are usually nulliparous. Symptoms and signs of pelvic congestion are frequently associated. The breasts present a characteristic lumpiness. The impression on palpation is that one can feel the entire limits of the breast as a thickened disc, some parts of which are harder or lumpier and are seemingly detached. The condition usually is bilateral. These lumps, so obvious clinically, disconcertingly disappear in the post-operative specimen. Frequently this condition occurs in breasts that are not so well-developed, and in which the lumps may be much smaller, so one may surmise the correct diagnosis by the age, cyclic nature of the changes, and pain, in the absence of other patent findings. The sectioned surface reveals increased amounts of fibrous tissue in which tiny gray nodules may usually be discerned.

Microscopically there is an increase in the myxomatous-appearing intra-lobular tissue with irregular lobule formation. Frequently there is a proliferation of acini without epithelial changes. Increased secretory activity is also frequently seen. Vascular engorgement seen clinically may not be so arresting under the microscope. In chronic cases there is a marked increase in fibrous tissue in both the inter- and intralobular areas.

Some people see a possible relationship between this and "adenosis". It is felt that mastodynia may be a fore-runner since it is frequently associated with the typical cystic changes of the latter especially older cases, and because of the similar low pregnandiol excretion levels. However, a certain similarity to fibroadenomas must also be noted, since these occur in similar age groups and the type of connective tissue proliferation is similar. Cyclic changes occur in both, and fibro-adenomatous areas are not too uncommon in long-standing cases of mastodynia. Furthermore, it might be noted that

adenosis cysts are found with a fair degree of frequency in any breast, especially from the fourth decade upward.

2. *Interlobular and lobular fibrosis.* This is not strictly speaking a disease process, but a result of aging or involution. It occurs in the older age groups from about 35 on to old age. It is often noted, too, in younger multiparous women. No significant cyclic changes are seen. Mastodynia is usually absent, but this varies with the neurotic tendencies of the patient. This condition is considered separate, but is often associated with other findings. It may be considered physiological, but is often so marked that it must be differentiated from tumor.

The breasts are generally flabby, but may be full in accordance with the nutritional status of the patient. The outline of the breast cannot be felt. It is usually described as shotty, but linear corded increases in consistency seem to follow the direction of the ducts. Occasionally distinct areas of lumpiness are found, but these in the absence of other pathology will be found on finer palpation to be the usual fibrous shotty tissue. The condition is bilateral and symmetrical, though an asymmetric picture is afforded by the presence of cysts or other pathology. The cut surface reveals an increase in dense white fibrous tissue which is glary, soft, and moist-appearing. Small dilated acini and ducts, not realized on clinical examination, are common. Microscopically there is a relative increase in the amount and density of the interlobular fibrous tissue. The intralobular fibrous tissue has become condensed, but is usually still distinct from the interlobular fibrous tissue by the course of the fibers. The acini are decreased in number in most lobules and frequently appear to be confluent. The vascularity is noticeably decreased. It must be remarked that breast changes are still haphazard and many well-developed lobules will be seen. So, if these observations are correct, what we see is similar to involutional fibrotic changes seen elsewhere. With a declining stimulus there is a decrease in the functioning tissue and in its blood supply and there follows arteriolar thickening and fibrosis. The changes so far described are in a sense physiological with an excess of these changes occurring in some instances.

The changes next to be described are not easily reconciled with normal physiology and are sometimes nearly or frankly neo-plastic. Again the breast defies man's natural inclination to conceive of all processes as being orderly. Therefore descriptions of these conditions are at much variance.

3. *Cystic disease.* This condition occurs most frequently during the fifth decade, but is not at all uncommon in the fourth and less commonly in the sixth decade. Of special diagnostic aid, when the history is reliable, is a history of a sizable tumor developing within a comparatively short period of time, often less than one month. As stated before, cysts occur which may be so small as to be not detectable. As seen clinically they are large and usually cause asymmetry of the breast. Frequently the condition is bi-lateral, and the cysts are palpable as single or multiple mobile rounded masses. The finding of fibrosis are almost a constant accompaniment. The sectioned surface will reveal the famed blue-domed cysts, and the ususal finding of fibrosis, as just described. The microscopic picture is most varied. There will be the increased inter- and intralobular fibrosis, numerous normal-appearing lobules, but in general the lobules will be atrophic. The typical cyst is rounded; often the epithelial lining is lost when the cyst reaches from 10 to 15 mm. in diameter. Usually in the region of the large cyst are numerous small cysts, generally in groups and having a flattened epithelial lining. Serial sections show that the cysts are rounded, dilated spaces, generally confluent with ducts. About the border are scattered numerous acini, generally without tubules. Judging from the configuration it is possible that the cysts represent dilated ducts and tubules with participation of the acini in their formation. In most cases of typical cystic disease there is found an associated cystic disease of another type to be described. This is the

4. *Metaplastic cyst of the sweat-gland type.* This associated cyst formation is quite different in appearance from that described above. The cystic spaces are irregular in outline, generally confluent. These do not appear rounded and distended and even in the formation of very large cysts its epithelial lining is retained. The lining is composed of a single layer of tall columnar acidophilic cells whose nuclei are generally,

but not necessarily, basal in position. At somewhat regular intervals there is seen a piling up of cells frequently with the formation of true papillae or plicae. Not uncommonly the immediately surrounding stroma exhibits good vascularity with secretory activity being present in the near-by breast tissue.

This metaplastic type of tissue when extensive and showing extreme hyperplasia presents the picture of what is variously known as Schimmelbusch's disease, Reclus's disease, or adenosis. The chief clinical aspects of this last condition are as follows: It occurs most frequently in the fourth and fifth decades in thin nervous women with small breasts, the upper outer quadrants of which can usually be outlined by palpation as a somewhat discrete mass of small cysts and is bi-lateral in at least half the cases. Pain is a fairly frequent complaint, but is by no means usual. There is also frequently a history of menstrual irregularity, and low fertility. This condition should be considered as an epithelial neo-plasia in contrast to the typical blue-domed cysts. Microscopically the epithelial proliferation is very marked with frequent bridging of the alveolar spaces and the presence of desquamated cells. Dilatation of terminal tubules, ducts, and lobules is also commonly seen, along with increased interlobular and intralobular connective tissue. Frequently cellular debris and other detritus become impacted in the ducts, giving rise to what is known as comedo-mastitis. It is felt that it is this detritus which evokes a chronic inflammatory response which may be responsible for the term mastitis.

5. Hyperplasia. The term as used here refers to a hyperplasia of the ducts and bears no obvious relationship to the above conditions. It is seen in the more atrophic breast of patients of an older age group, and is generally not clinically detectable. It is associated with old, retained, and inspissated secretions. Microscopically there is an epithelial hyperplasia, the cells of which are usually hyperchromatic, and often neo-plastic in appearance. This picture is often found in association with carcinoma of the breast. There is some opinion that this may be a definite pre-cancerous lesion. The connective tissue has become collagenous and quite dense, and reduced in vascularity. Well-developed lobules are rare; however, the hyperplasia seems to be most marked in the lobular areas.

It is obvious, and consistent with most views, that the term "chronic cystic mastitis" when it includes all of the described conditions is without meaning. Yet, this terminology persists because of the lack of any generally accepted classification. It is thought that much might be gained if the main pathological changes are reported to the surgeon in terms that are meaningful to him. The shortcomings of such a procedure are patent, but at least the physician could then recognize the kind of process with which he is dealing. This variously-interpreted term has given rise to greatly conflicting reports, and has prevented the proper use of much information already uncovered.

In mastodynia fairly consistent low urine pragnandiol levels have been found by some investigators[12, 26], thus pointing to depressed corpus luteum function as a possible cause. Progestrone during the lasthalf of the menstrual cycle has been used successfully in the treatment.[12] Chorionic gonadotropin has also been used.[25] However, all investigators have not found abnormal pragnandial excretions.[24] It has long been observed that castration and menopause have been followed by relief [22, 24], so a factor of hyperfunction may also be present. In fact, it appears that an active ovary, producing estrin, is necessary for this condition to develop.[6] Local inunctions as well as injections of testosterone[21, 18] have given relief for periods of several months. Estrogens are contra-indicated.[9]

Fibro-adenoma has been thought to be due in some way to ovarian hyperfunction since it occurs only after puberty and before menopause. This growth also is aggravated by pregnancy. However, it is found more frequently in nulliparous patients[24] and the estrogen excretion of patients with fibro-adenoma has been found to be the same as in normal controls.[22]

In cystic disease there seems to be no consistent change in estrogen secretion,[22] however it has been shown that estrogen injections in animals cause cyst formation.[12, 24, 17] It is also observed that cystic disease tends to disappear with pregnancy. I do not believe that any very satisfactory treatment has been devised other than surgery. Treatment with estrogens has been observed to increase the symptoms.[19] It

must be remarked that the diagnosis of cystic disease *does not rule out cancer*, and that its peak of incidence corresponds to that of cancer. It has been found by various investigators that cancer occurs from two to five times as frequently in breasts with cystic disease.[12, 24, etc.] In the definitely neo-plastic condition of adenosis or Schimmelbusch's disease there has been thought to be an estrogen-progesterone disproportion[24, 26] with either an absolute or relative decrease in progesterone. Success in treatment has been claimed by the use of progesterone in the latter half of the menstrual cycle.[27]

However, in spite of the great volume of work that has been done to try to determine the relationships between breast changes and ovarian hormone functions it still must be remembered that any such relationships are probably indirect. Perhaps this accounts for the many differences of opinion noted in the literature. It seems almost certain that any ovarian hormonal effects are mediated through the pituitary gland.

CONCLUSIONS

It is argued that the term chronic cystic mastitis should be abandoned as a useless and harmful term. Furthermore, because of the immense nomenclature now applied to these various benign tumefactions of the breast and because of the great difficulties arising therefrom, it would seem better to revert to a description of the main pathologic picture and abandon names as much as possible.

DISCUSSION

Dr. Chandler Foot [New York City]: I think this is a very important paper and a very thoughtful analysis of the borderline between the normal breast and the carcinomatous breast. Not that I infer that the condition which Dr. Dolan described necessarily leads to cancer. I simply mean that lesion lies on the borderline.

The first mention of differences in the mammary epithelium during the menstrual cycle probably was published by Rosenberg well over thirty years ago. It was published under a most outrageous preface by the director who conducted the laboratory where Rosenberg was active.

Rosenberg hinted that he thought there was a hormonal activity, but hormones at that time had not been described or discovered and it was this thesis that was attacked by the director of the laboratory in his preface.

I called that article to the attention of Drs. Stewart and Foote in the Memorial Hospital and they began to correlate what they found in their sections of breasts with the history of the patient to see if there was any relation between the phase of menstrual cycle and the condition and appearance of the breast. That led to a very pleasant sport because they began laying bets on the phase of the menstual cycle and following that up in the history and the victor collected from the loser.

But they found there was a very definite connection between the phase of the menstrual cycle and the appearance of the breast. That is, that in the intermenstrual period many female breasts reverted to an almost masculine type.

Then, menstrual hyperplasia is a dangerous condition in the hands of some pathologists; one particular case comes to my mind where a young girl just married and twenty-two years old had a biopsy on her breast occasioned by some pain so that she *wanted to have investigated. The local pathologist* had read about carcinoma in situ. Fortunately the attending physician sent the young lady with the slides to the Memorial Hospital and Dr. Stewart sent her over to me to get some backing up. They were going to perform a radical mastectomy on this very handsome, newly-married young girl, whereas there was nothing wrong with her breast except menstrual hyperplasia.

Thus it behooves us to study these conditions and know them and be familiar with them.

I am very glad to hear you say that you don't consider the normal cells of hyperplasia sweat glands. *Blood, sweat and tears may mix, but milk* and sweat is a poor mixture.

Of course, we can't argue logically that way, but nevertheless it has always been very puzzling as to why we get this apparent sudoriparous tissue mixed in with the mammary tissue and I think it is just a matter of both the sweat glands and the breast that arises from similar anlagen or primordia and that it is primarily a similarity rather than an identity.

I am also interested to hear your remarks on precancerous lesions. It seems to me that we see cancer follow this group of fibrotic diseases — I think that is a better name for them than "chronic fibrous mastitis" — I think we see it much more often in this case than we do following intercanalicular fibroadenoma. I don't believe that that usually precedes carcinoma by any means.

Now, the last thing I wanted to point out was that in this condition the Papanicolaou method is being tried out. That is, gently expressed or aspirated secretion will give an idea as to what sort of cells are being desquamated, particularly in these desquamative conditions where that is a marked feature, and they can be readily recognized. Carcinoma, is not ruled out, but at least an indication of the absence of carcinoma is obtained. When carcinoma is present its cells do come down in the ducts

I don't know whether we should do much expressing of mammary secretion in the presence of carcinoma. I think it may be a dangerous procedure, but I am merely mentioning to you the fact that we have had definite positive findings in

expressed mammary secretion. Probably a breast pump may be safely used.

Dr. Simonds (Chicago, Illinois): Dr. Foot's remarks about trying to express secretion out of the carcinomic breast are well taken. The results of the study of transplanted tumors were, in general, disappointing. But one most important fact was learned from this source. Transplanted tumors do not ordinarily metastasize, but can be made to do so by rough handling. Rough handling of a carcinoma of the breast may increase its tendency to metastisize.

Dr. Dolan: Well, I'd like to make a remark about Rosenberg's paper. Undoubtedly the greatest contribution made was the recognition of hormonal effects upon the breast. However, I think that when one reads the paper he is misled a great deal in that Rosenberg outlines the changes in the breast as being a good deal more distinct, I believe, than they actually are, and for that reason I think it has confused the subsequent literature for quite a number of years.

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CASE RECORDS OF THE COOK COUNTY HOSPITAL

KARL MEYER, LEO M. ZIMMERMAN, DEPT. EDITORS

Bacterial Aortitis At Site of Coarctation Of Aorta, Completely Occluding It

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Chicago

Coarctation of the aorta is divided into two types, the infantile and the adult[1], and the degree of narrowing in either type, may vary greatly[2]. Since the clinical signs of coarctation result from the narrowing of the aorta, a patient with slight or even moderate constriction may go through life without signs or symptoms. However, clinical manifestations may take place in such a patient, should the degree of narrowing become aggravated either by thrombosis or vegetations at the site of the coarctation. The latter occurred in our case.

One of the less frequent complications of coarctation is bacterial aortitis at the area of constriction[1, 2, 3, 4]. Another site for bacterial involvement is the associated bicuspid type of aortic valve, which is not infrequently seen in patients with the adult type of coarctation [2, 3, 4, 5, 6]. Scattered through the literature are reports of coarctation of the aorta with or without associated bicuspid aortic cusps, harboring bacterial vegetations on one or both of the congenital deformities.

Reifenstein, Levine and Cross[7] reviewed a series of 104 autopsied cases of coarctation of aorta which had been reported since 1928. They found bacterial aortitis, unassociated with endocarditis in six patients. In two instances the vegetations were on the ascending aorta, and in the other four, just distal to the area of constriction. They cite a single case with aortitis and apparent recovery one year after massive penicillin therapy. Several patients had bacterial endocarditis and an associated bacterial aortitis. The endocarditides were mostly on the bicuspid aortic leaflets, although in few instances, the mitral valve only was involved.

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A twenty year old white male entered the Cook County Hospital on November 11, 1942, because of anorexia, lassitude, weight loss, night sweats and fever of six weeks' duration. He had always previously been in perfect health. In high school he had taken an active part in all sports and was considered to be the best athlete in his class. Two years ago he was refused employment in several places and was told that he had rheumatic heart disease. This was a complete surprise to him. He had never had rheumatic fever or any other serious illness, to his, or his mother's knowledge.

About two months before entry he gradually began suffering from the symptoms mentioned above and in the last four weeks he definitely became worse. He had no preceding "colds", tooth extraction, venereal disease or any other illness.

About three weeks before admission he accidentally fell off a stool, struck his back on the floor, but did not lose consciousness. However, he was unable to move his legs for about thirty minutes. After that, he got up and was able to go home by car. From that time on he remained with lumbar back ache and some stiffness and numbness in his lower limbs, intensified by motion. Five days prior to entry, he experienced sudden sharp pain in the L.U.Q. aggravated by motion, deep breathing and turning in bed.

Examination revealed an ill, pale and anxious-looking young man. Temperature was 101°F and respiration 20. The pupils were normal. There was a slight icteric tinge to the sclerae. There was one small petechial hemorrhage in the conjunctiva of the right eye. There was a questionable petechial hemorrhage on the palate. Pallor of the mucous membrane was marked. The pulse was 110, regular and of the Corrigan type. The blood pressure was 150/30. There were no palable lymph nodes, and the lungs were clear. *Heart* borders were 3 x 13 cms and there was questionable fullness in the third left interspace. A short systolic thrill over the aortic area and the episternal notch was palpated. There was a fairly rough systolic murmur and a mid-diastolic rumble at the apex. The first sound was not loud. A short but rough systolic and a long blowing diastolic murmur were elicited over the aortic and pulmonary areas. P_2 was greater than A_2. *Abdomen* — there was diffuse tenderness. The liver was not definitely felt, but the spleen was felt one fingerbreadth below the costal arch. *Femorals*: Pulsation was very weak. The blood pressure was not obtainable. The dorsalis pedis were not felt. The lower extremities were, however, not cool to touch and the color was fairly normal. There was no edema of the back or of the lower extremities. The reflexes were sluggish. Examination of the back revealed tenderness in the lumbar region but with no definite localization. Collateral circulation of upper and lower thorax was neither felt, nor seen.

Laboratory Findings: Urine: Sp.Gr. 1.015; albumin-2; RBC-4-6 per H.P.F.: WBC-Just a few. The blood showed hemoglobin 40%; RBC 2,100,000; WBC 6800; P. 76%; L. 13% M. 11%. Total protein-5.3; albumin-3.2 and globulin-2.1. The N.P.N. was 124 mg and creatinin 8.3 mg. Wasserman was 3 and Kahn was doubtful. The blood culture was repeatedly negative.

DIAGNOSIS: The following was considered: (1) rheumatic heart disease, mitral stenosis and insufficiency; aortic stenosis and insufficiency; subacute bacterial endocarditis and multiple embolization to spleen, kidneys and possibly muscles of the back, and thrombosis of abdominal aorta at the bifurcation, secondary to an embolus (very rare complication), being responsible for the weak femoral pulsation; (2) or coarctation of the aorta with bicuspid aortic cusps, the latter, or the constriction, or both sites harboring the bacterial endocarditis, thus accounting for the entire clinical picture.

COURSE: Blood transfusion and sulfonamides were immediately started. In several days the sulfa blood level indicated adequate dosage but the patient failed to rally. He was too weak to be transported for an x-ray of his ribs. He continued throwing emboli and died in four days.

AUTOPSY FINDINGS: (Dr. W. Schiller) *Heart*: 580 gms. The walls of both ventricles were thicker than normal. With the exception of the aortic cusps, the valves were normal. No thickening of the leaflets or cordae tendinae of the mitral valve was seen. The aortic valve had two cusps, the two posterior cusps being represented by a single wide one. In the corresponding sinus of Valsalva a white longitudinal ridge about 2-3 mm. wide in the aortic portion of its wall nearer one commissure than the other was seen. The anterior cusp was normal in size. However, on the ventricular aspect of the cusp and downward over the adjacent portion of the

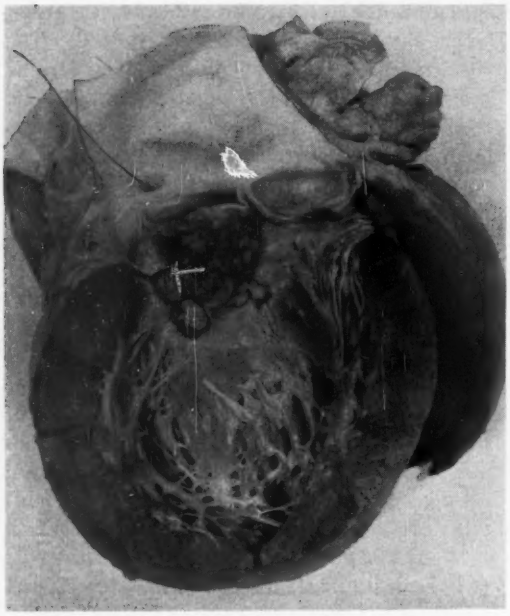

Figure 1. High origin of the coronary artery, bicuspid aortic valves with vegetations and hypertrophy of the left ventricle are seen.

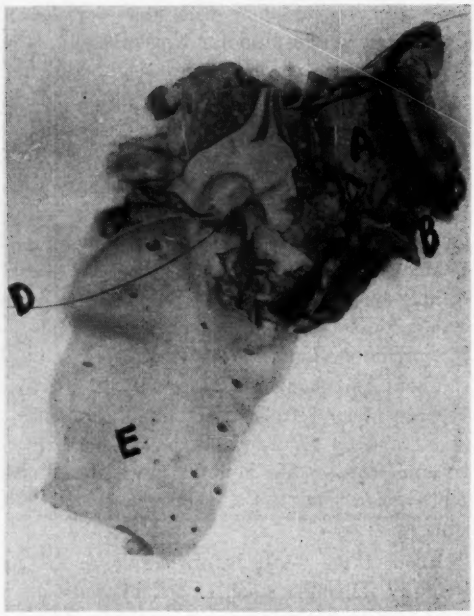

Fig. 2. A — trachea. B — right main bronchus. C — left main bronchus. D — probe in patent ductus. E — aorta. F — vegetation at site of coarction.

wall of the left ventricle there was a mass of yellowish-brown friable material, 1 cm, in its greatest thickness, 3 cm. in length and 2.5 cm. in width. (Figure 1). This vegetation sealed together the two cusps of the aortic valve at one commissure. At the other commissure there was wide separation of the two cusps (2-3 mm.). The free margin of the larger cusp showed moderate thickening. On the ventricular aspect of the cusp a thin layer of yellowish brown material was noted, at and just below the free margin (Figure 1). The anterior sinus of Valsalva revealed an out-pouching of the aortic portion of its wall. This outpouching was about 9 mm. in in diameter. A small amount of friable material lined this out-pouching. It was situated approximately at the usual site of the orifice of the right coronary artery.

Further inspection of the anterior sinus of Valsalva revealed an out-pouching of the aortic aspect of the anterior cusp. At the base of this out-pouching there was a rent through the valve substance and vegetation. There were no antemortem clots in the heart cavity. The orifices of both coronary arteries were higher than normal, but both were patent. The coronary arteries and the branches were normal. There was acute fibrinous pericarditis.

Aorta and Pulmonary Artery: Immediately distal to the origin of the carotid and the left subclavian arteries, the lumen of the aorta was completely occupied by a mass of friable, yellowish, brown material attached to the posterior and postero-inferior portion of the wall of the aorta (Figure 2). Where attached, there was a thin outpouching in the wall of the aorta 7.5 cm. in diameter. Just proximal to this outpouching, the aorta measured 2-2.5 cm. in circumference. Just distal, it measured 6 cm. in circumference. A small somewhat dimpled placque 1-2 mm. in diameter was noted in the wall of the pulmonary artery at the usual site of the orifice of the ductus arteriosis. A fine probe (1 mm. thick) was inserted beneath the placque and readily passed from the pulmonary artery to the aorta (Figure 2). The aorta was otherwise normal. No atheroma was present. The orifices of the intercostal arteries were not larger than normal. Palpation revealed no erosion of the inferior aspect of the ribs.

MICROSCOPICALLY: There were miliary abscesses and infarcts (embolic) in the myocardium; infarcts to the spleen, central necrosis and edema of the liver; subacute glomerulonephritis, acute focal pancreatitis, and necrosis of aorta with neutrophilic infiltration. The anatomical diagnosis was as follows: *Bicuspid Aortic Valve (congenital anomaly), bacterial endocarditis of aortic valve, mycotic aneurysms of the anterior aortic cusp, and of the aortic portion of the wall of the anterior sinus of Valsalva, rupture of the anterior cusp of aortic valve, mycotic aneurysm of the thoracic aorta just distal to the exits of the great vessels, moderate coarctation of aorta with bacterial aortitis at site of narrowing, minutely patent ductus arteriosus, hypertrophy and dilatation of the heart, embolic abscesses of left ventricular musculature, anomalous origin of the coronary arteries, acute fibrinous pericarditis (uremic), chronic passive congestion of viscera, infarcts to the lungs, spleen and kidneys, and diffuse glomerulonephritis.*

COMMENT

The coarctation in our patient was of low caliber, as attested by the absence of collateral circulation and erosion of the ribs and finally by the autopsy findings. It was only when the vegetation aggravated the constriction that clinical manifestations became evident, thus making us suspect the presence of a coarctation. Because of the rapidity of the process, one could not expect the development of collateral circulation as it typically is seen with pronounced stricture. We believe that his symptoms of stiffness and numbness of the back and lower extremities were not altogether due to his fall, but were in some measure caused by the rapidly accumulating vegetations.

While the mildness of this coarctation would not have predisposed our patient to heart failure, rupture of aorta or apoplexy — complications seen in the more severe type of coarctation — he was, however, not less predisposed to bacterial aortitis or endocarditis, or both as the course of events proved. In a sense, such a patient is worse off since his congenital deformity is silent and the infection is not recognized at all or too late to effect a cure. By contrast, the patient with pronounced coarctation may be better off, since he may reap the benefit of modern surgery besides being constantly watched for the development of an aortitis or endocarditis. It is possible that at present, early and adequate therapy in a case like ours could effect a cure. Such a case has been reported[7]. The minutely patent ductus was of no functional significance.

The interpretation of the murmur that led to the diagnosis of rheumatic heart disease elsewhere several years before the onset of his symptoms is difficult, since one does not know the type of the murmur found at that time. If it were denoting an insufficiency of the aortic valves one could speculate, in the absence of a rheumatic or luetic process, about the remote possibility of the bicuspid cusps causing it. Abbott found a diastolic murmur in one out of thirty-two cases with bicuspid aortic cusps[2].

Finally, the positive Wasserman was due to a false biologic phenomenon, seen occasionally in bacterial endocarditis.

CONCLUSION

A patient, with a mild coarctation, associated with bicuspid (congenital) aortic leaflets developed a bacterial aortitis and endocarditis.

The vegetations were present on the bicuspid aortic cusps and at the site of the coarctation, thus aggravating the latter.

The vegetations completely occluded the aorta, ultimately.

Mycotic aneurysms, one of the right sinus of Valsalva and another of the aorta were found.

Multiple emboli to the greater circulation took place. Uremia finally developed as a result of diffuse glomerulonephritis.

The diagnosis of coarctation with aortitis was considered during life and the possibility of associated bicuspid aortic cusps, also harboring vegetations, was postulated.

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CASE REPORTS

Incarcerated Traumatic Diaphragmatic Hernia

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Diaphragmatic hernia is a term which includes various types of defects in the continuity of the diaphragm. A very excellent description and analysis of the types and their surgical importance has recently been written by Harrington. The most common type of diaphragmatic hernia is the esophageal hiatus variety which is a true hernia containing a sac which protrudes in the chest cavity. This form is amenable to surgery; however, we are not concerned with it in this report. The next most common is the traumatic type in which there is a cutting, tearing or bursting force which separates the fibers of the diaphragm, thus creating a defect. Usually, there is no sac associated with this type of hernia, thus in reality, it cannot be called a true hernia. Other varieties are congenital malformations which include pleuroperitoneal defects, subcostosternal defects and congenital absence of a portion of the diaphragm.

This case is being presented to demonstrate a condition which gave progressive symptoms and continued unrecognized for six years following a very definite incidence of trauma. The diagnosis is relatively simple after the condition has become well established and the surgical treatment is quite satisfactory. Such cases are of great interest because although symptoms may be minimal or absent the potential dangers involved are very grave. It is with this in mind that we wish to emphasize early surgical repair.

Case History: The patient, an eleven year old white male, entered the Michael Reese Hospital with a diagnosis of diaphragmatic hernia for surgical repair. His outstanding presenting symptoms were abdominal cramps which were intermittent and aggravated by ingestion of food, slight dyspnea on exertion, and an easily tired feeling which was noticeable because he couldn't main-

From Department of Surgery — Michael Reese Hospital.

tain the pace of playing with playmates his age. His parents stated that he was very skinny, he couldn't gain weight and that he had a very poor appetite. The past history revealed that six years previously, the patient was struck on the right side of the body by a concrete building block. This resulted in some broken ribs and an otherwise uneventful recovery. He was apparently well and had no complaints until about two years prior to his admission when his parents noted that the child became more easily fatigued and was more short of breath than were the other children with whom he played. His parents further noted that as he grew older he was not as robust and healthy looking as a normal boy his age should be. His appetite was always poor and he failed to gain weight. On varying occasions for the past few years he complained of abdominal pains and cramps; most marked in the epigastrium. The pains, however, were transient and apparently not too distressing. About one month before admission to the hospital after a large Sunday dinner he was seized with severe abdominal pains which were again mainly in the epigastrium and left upper abdomen. The pain was more persistent and was now associated with nausea and marked anorexia, but no vomiting. The pain was a cramping colic type, causing the boy to double up with discomfort. A physician was consulted at this time and although he made no definite diagnosis, his impression was a recurrent attack of appendicitis. The symptoms subsided spontaneously with conservative management. Later another physician was consulted and upon examining the child was greatly amazed to find the heart lying in the right chest, dullness and absent breath sounds, plus gurgling bowel sounds in the left chest. Fluoroscopy and x-ray revealed a dextro position of the heart which was secondary to abdominal contents in the left chest pushing it over. (See Figures 1 and 2 (B)). A further diagnostic procedure of barium enema was done which revealed a large portion of colon to be lying in the left chest (Figure 3). The diagnosis of traumatic diaphragmatic hernia was made.

The patient was prepared for surgical repair of the diaphragmatic hernia. Preoperative blood and penicillin were given. Under endotracheal ether and cyclopropane anesthesia, a left thoracic incision in the eighth interspace was made. When the chest was opened abdominal contents

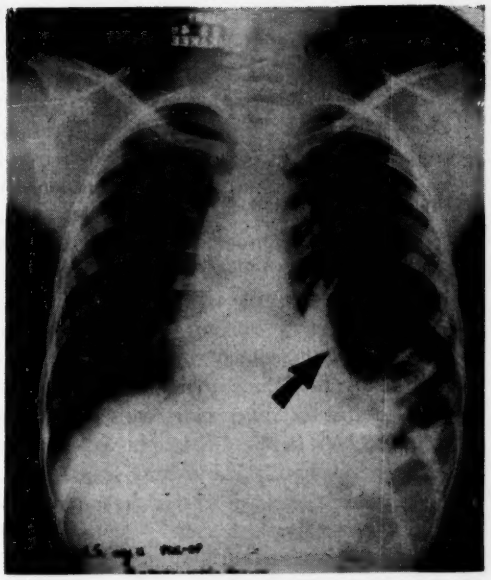

Figure 1 — P.A. x-ray showing: Heart shifted to right, abdominal contents in left chest (arrow).

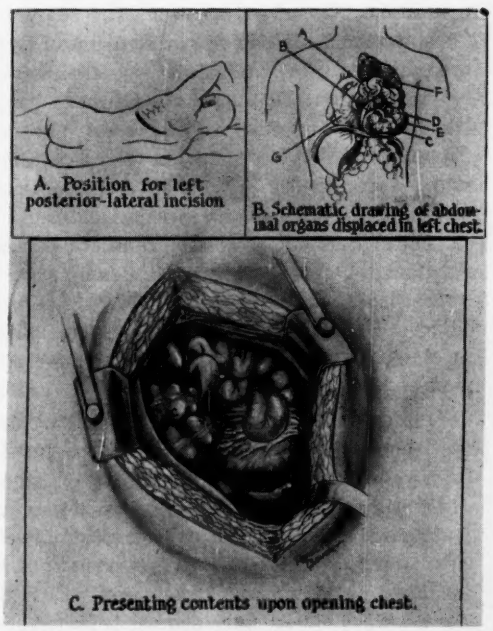
A. Position for left posterior-lateral incision
B. Schematic drawing of abdominal organs displaced in left chest.
C. Presenting contents upon opening chest.

Figure 2, 2(B) and 2(C). A=small bowel, B=left lobe of liver, C=splenic flexure of colon, D=Stomach, E=Spleen, F=Lung.

presented. (Figures 2 (A) and 2 (C)). They filled the anterior and medial portion of the chest cavity to its apex. Large bowel (splenic flexure, transverse colon and descending colon), stomach, coils of small bowel, spleen, and left lobe of the liver lay within the chest. All these structures were presented through a defect in the dome of the left diaphragm which extended toward the left crus. The opening was five centimeters in diameter. The abdominal viscera were carefully returned to the abdomen without opening the diaphragm further. Minor adhesions were freed and the contents returned with minimal difficulty into the scaphoid abdomen which at once became flattened with its increased contents. The hole in the diaphragm was repaired with interrupted silk imbricating mattress sutures (Figure 4). Care was taken not to compromise the esophageal hiatus. The lung which was markedly compressed and atelectatic due to the crowding by the intruding abdominal viscera, expanded when increased intratracheal pressure was exerted from the anesthetist's bag. An indwelling catheter for under water drainage was brought out through a stab wound. Closure was made anatomically. A Levine tube was placed into the stomach for decompression. The postoperative condition and course was completely uneventful. The patient was ambulated the day of operation and was ambulant thereafter. Eight days post-operatively the patient was discharged. Follow up x-rays and fluoroscopy showed a complete return to normal of his chest picture. (Figure 5). The left lung was completely reexpanded and the heart was back to its normal position. One year later the patient had resumed complete activity and showed no signs of dyspnea or fatigue. He no longer had abdominal complaints, had an excellent appetite and gained weight. The boy now indulges in such active games as basketball and is completely asymptomatic.

Comment: Diaphragmatic hernia is a condition which is very frequently overlooked in the diagnosis of vague abdominal distress or vague cardiorespiratory symptoms. Although traumatic diaphragmatic hernia usually manifests itself early after the incident of trauma, it may as in this case, be silent for many years. In this case a period of six years elapsed before symptoms became distressing enough to warrant medical attention. The history of pre-

Figure 3 — Barium enema showing splenic flexure high in the left chest.

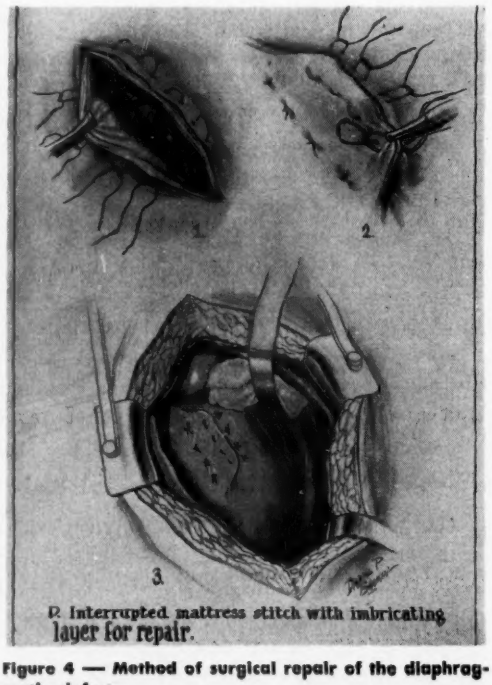

Figure 4 — Method of surgical repair of the diaphragmatic defect.

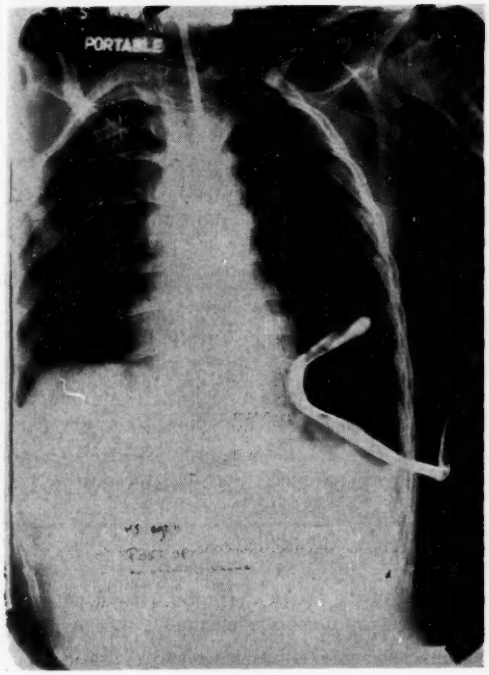

Figure 5 — Post-operative x-ray of the chest showing re-expanded left lung.

vious trauma was almost entirely forgotten by the patient and his parents.

The entire clinical picture and symptom complex become explainable when we correlate anatomic and surgical findings with the patient's complaints.

It is interesting that although the direct trauma was on the right side of the lower chest and upper abdomen the diaphragmatic injury is on the left. The bursting force was transmitted through the abdomen and resulted in a tear in the dome of the left diaphragm. This is the most common site of traumatic diaphragmatic defect — probably because the liver on the right buttress the right leaf of the diaphragm, whereas the left leaf is not buttressed.

The early picture after injury probably was one of a small diaphragmatic defect with very little, if any, abdominal viscera displaced with the left chest. Thus, there were very few, if any symptoms. However, as more abdominal organs crowded into the chest, symptoms developed. These symptoms are entirely mechanical in nature effecting (1) the gastro-intestinal system (2) the cardiovascular system (3) the respiratory system.

As more viscera crowds into the chest through a small opening in the diaphragm, one can logically conclude that these organs will have more difficulty returning to their normal abdominal position, and that, therefore, an increase in the intraluminal pressure of the hollow viscera such as stomach, small bowel or large bowel will naturally lead to incarceration. Thus we see in this case that the abdominal viscera crowded into the chest became incarcerated and would not reduce themselves. After ingestion of any food, especially after a large meal, the gastro-intestinal symptoms — cramps, nausea, anorexia, and even vomiting became most pronounced associated with distension of stomach and bowel. These are obstructive symptoms. It is entirely conceivable that the incarcerated bowel may be the site of strangulation, especially after the ingestion of any food and increased peristalsis. Indeed cases of strangulation of the stomach or bowel have been reported in the literature, although such cases are rare, the complication is of such a serious nature that unless immediate surgical intervention takes place, the condition may be rapidly fatal. Recently Dugan and Samson reported four such cases which they reviewed in the literature and added two more of their own cases of strangulated stomach. They emphasize the importance of early diagnosis and early surgical treatment of such cases. Harrington also emphasizes early repair of traumatic diaphragmatic hernia; in fact, as soon as diagnosed for two reasons, (1) to prevent the complication of strangulation and (2) because the abdominal organs lose their "rights of residence in the abdomen". Diagnosis can usually be made on physical examination and can readily be confirmed by chest x-ray and gastro-intestinal x-rays.

The cardio-respiratory picture is likewise easily explained. Crowding of the left thorax causes mechanical collapse of pulmonary tissue, in this case the left lower lobe and part of the left upper lobe were airless reducing markedly the vital capacity of the patient. Thus the boy found himself short of breath and easily fatigued when exerting himself in games with his playmates.

Also shift in the mediastinum and heart to the right can cause embarrassment of the circulatory

system and add further to the picture of cardio-respiratory distress. Post-operatively the left lung is re-expanded and the heart and mediastinum return to their normal position. The patient is freed of symptoms.

Although there is a difference of opinion as to the best approach for surgical repair of such hernias it is believed that the thoracic approach for traumatic diaphragmatic hernia is far superior to the abdominal approach. With the thoracic approach one possesses the advantage of very adequate exposure, clear visability of all the structures, the section of any adhesions to the lung and mediastinum, ability to reinflate the lung under direct vision and a very adequate approach to the diaphragmatic defect. In the matter of repair simple mattress sutures in this case were quite adequate and reinforcement with imbricating stitches was possible. Other techniques of closure such as the use of fascia lata for approximating large defects can be used.

Inflation of the lung under direct vision at the operating table is of extreme importance so as to overcome atelectasis. Careful attention to maintaining adequate aeration of the lungs is of utmost importance in prevention of pulmonary complications. Early ambulation and underwater catheter, water seal drainage from the chest aid greatly. The principle of complete and immediate re-expansion of the lung will avoid the dread complications of atelectasis, pneumonitis and empyema. It is, we believe, failure to respect this point which makes for trouble and perhaps has discouraged surgeons from using the thoracic approach more frequently.

As this case demonstrates in conditions of persistent vague symptomatology which is associated with either the gastro-intestinal tract, cardio-vascular or pulmonary system, one must suspect diaphragmatic pathology. Too often, vague symptoms may be dismissed without an adequate work up which must include chest x-rays, and gastro-intestinal x-rays. In the advanced cases, physical diagnosis will reveal the trouble, but in small diaphragmatic defects abdominal contents may intermittently slip in and out of the chest and so make the diagnosis more obscure. Careful x-rays, perhaps with the patient postured in Trendelenburg position, will reveal the source of the patient's vague distress.

SUMMARY

A case of traumatic diaphragmatic hernia with delayed symptoms is presented. The symptom complex is evaluated and correlated to the pathologic findings. Successful operative repair relieved all symptoms.

104 So. Michigan Ave.

We wish to acknowledge assistance from Drs. J. J. Horwitz and S. F. Strauss.

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ACCIDENTS

The combined energies of the American Academy of Pediatrics, the National Safety Council, the Children's Bureau, and the Metropolitan Life Insurance Company are being directed toward curtailment of accidents, now the leading cause of death in childhood. According to the statistics of the Metropolitan Life Insurance Company, accidents now outrank every other cause, at ages one to four, and the reduction in mortality in the past fifteen years has been relatively small. A campaign of safety education directed largely to adults should help to prevent these burns, poisonings, falls, motor vehicle accidents and drownings in early childhood. *Excerpt: Recent Advances in Pediatrics, May B. Guy, M.D., J.A.M.W.A., Nov. 1950.*

NEWS OF THE STATE

CHAMPAIGN

Fifty Year Members.—Drs. George R. Blackstone, Urbana, and Parley C. Casto, St. Joseph, were presented with the insignia of the Fifty Year Club of the Illinois State Medical Society at the November meeting of the Champaign County Medical Society. The presenation was made by Dr. Harlan English, Danville, Councilor of the District.

CLARK

Physician Honored on Birthday.—Dr. Dellie L. Wilhoit, Martinsville, was given a surprise birthday party by the members of the community, November 24. Dr. Wilhoit, sixty-eight years of age, taught school before he entered medical practice.

COOK

Society News.—On October 26, Dr. Herman L. Kretschmer delivered the William T. Belfield Memorial Lecture at the Chicago Urological Society meeting. His subject was entitled "The History of the Development of Urology in Chicago and the Middle West." Dr. Kretschmer delivered the Fourth Peter T. Bohan Lecture, November 10, before the University of Kansas School of Medicine, on "The Relationships Between Urology and Internal Medicine."—Dr. Leon Unger addressed the regional meeting of the American College of Physicians, November 18, in Wisconsin, on "Migraine."—The Chicago Medical Society was addressed December 13 by Dr. Perrin H. Long, Baltimore, on "The Current Clinical Usage of Antibiotics" and Commander T. J. Canty, MD. U.S.N., officer in charge of the amputation program and director of naval prosthetic research, U. S. Naval Hospital, Oakland, Calif., on "Amputation Surgery and Recent Developments in Artificial Limbs."—Arthur Steinhaus, Ph.D., professor of physiology, George Williams College, addressed the Chicago Society of Physical Medicine and Rehabilitation, January 24, on "Physiology of Exercise."

Branch Meetings.—"The Therapy of Hypertension" was discussed by Dr. Oscar Sugar, Chicago, before the North Shore Branch of the Chicago Medical Society, December 5. Other participants were Dr. Eugene Ferris, Cincinnati, internist, and Dr. Geza de Takats, Chicago.—At a meeting of the Northwest Branch of the Chicago Medical Society, December 1, Dr. Eugene T. McEnery, Chicago, presented "Pulmonary Tuberculosis in Children."

Personal.—Dr. Walter G. Maddock, the Elcock professsor of surgery, Northwestern University Medical School, has been unanimously elected to the chairmanship of the medical and scientific committee of the Illinois Division, American Cancer Society, Inc., for the year 1950-1951, it was announced recently by Edward Foss Wilson, president of the society. The medical and scientific committee, composed of fifty-two Illinois physicians and scientists, is responsible for the division's medical and scientific policy, including research, education and service. It reviews all professional activities and projects and recommends appropriations to the execuive committee of the society.—Dr. Walton Van Winkle, Jr., formerly medical official with the U.S. Food and Drug Administration, and recently secretary, Therapeutics Trials Committee of the American Medical Association, has been appointed director of research for Ethicon Suture Laboratories Inc., succeeding Dr. H. L. Davis. The appointment was effective January 1.

Dr. Percy Honored.—Dr. Nelson M. Percy, surgeon in chief at Augustana Hospital, was honored by members of the staff of the hospital and their wives, November 7, marking the completion of fifty years in the practice of medicine.

Physician Given War Medal.—Major Wade F. Heritage, Chicago, was recently awarded the Bronze Star for gallantry in action with the 24th Infantry Division in Korea.

Award to Dr. Wolfer.—The second annual award for outstanding service in cancer control, presented by the Illinois Division of the American Cancer Society, was awarded to Dr. John A. Wolfer, October 6. Dr. Wolfer is professor emeritus of surgery and director of the tumor clinic at Northwestern University Medical School. In a citation which accompanied the engraved medallion, Dr. Wolfer was cited as one of the pioneers in the development of the activities of the American Cancer society.

Chairman Named for Special Committee.—Dr. Warren H. Cole has been appointed by Dean Stanley W. Olson as chairman of a committee which will select a new head for the department of medicine at the University of Illinois College of Medicine and the University's Research and Educational Hospitals.

Appointed to the committee with Dr. Cole are Dr. Granville A. Bennett, Dr. George M. Hass, Dr. Francis J. Gerty, Dr. Henry G. Poncher, Dr. F. E. Senear, and Dr. George E. Wakerlin.

Dr. Robert W. Keeton, present head of the department of Medicine, will reach the compulsory retirement age of 68 during the present academic year.

Winter Lecture Series at Chicago.—New and important advances in the fight against death and disease will be reported by physicians and surgeons of the University of Chicago's medical and biological research center in a University College winter lecture series. Dr. William J. Dieckmann, chairman of the university's department of obstetrics and gynecology and chief-of-staff of Chicago Lying-in Hospital and Dispensary, will open the series with a discussion on "Safe Childbirth." He will speak at 5:30 p.m., Tuesday, January 9, at the university's loop center, 19 South LaSalle. Chief of the university's surgery department, Dr. Lester R. Dragstedt, will present recent progress in the treatment of peptic ulcers at the January 23 lecture. Dr. Dragstedt, whose vagatomy operation for gastroduodenal ulcers, discovery of lipocaic, and studies on the function of pancreas are milestones in surgery, was awarded the 1950 gold medal of the American Medical Association for original investigation.

Other lectures and the topics of the lectures for the series are: Dr. Thomas W. Lester, Jr., assistant professor of medicine, "Controlling Airborne Infections," January 16; Dr. Dwight E. Clark, associate professor of surgery and secretary of the department, "Radioactive Iodine: New Treatment for Thyroid Diseases," January 30; Dr. M. Edward Davis, professor of obstetrics and gynecology, 'Diagnosis and Treatment of Gynecologic Cancer, Sterility and Menopause," February 6; and Dr. Leon O. Jacobson, associate professor of medicine, "The Fight Against Cancer," February 13.

Faculty Appointments at Chicago Medical School.—The following appointments were recently made at the Chicago Medical School: Dr. Harry H. Fineberg, associate in psychiatry; Dr. Bernard M. Chapman, associate in surgery; Dr. Paul Hurwitz, assistant professor of ophthalmology; and Drs. David Holden and Bina Rosenberg, instructors in ophthalmology.

New Dermatology Department Head at Northwestern.—Dr. Herbert Rattner, professor of dermatology in the Northwestern University Medical School, has been appointed chairman of the Department of Dermatology, President J. Roscoe Miller announced December 7.

The chairmanship was formerly held by Dr. Edward Oliver, who is now professor emeritus of dermatology. Dr. Oliver, who joined the Medical School faculty in 1940, had served as department chairman since that time.

Dr. Rattner, graduate of the Northwestern Medical School in 1926, served as a staff dermatologist in the Cook County, Michael Reese, Augustana, and South Shore hospitals before joining the Medical School faculty in 1940.

He was a volunteer consulting dermatologist for the army and a member of the Food Administration Planning Board during World War II. He is author of a number of articles on dermatology and syphilology.

Fred L. Adair Foundation Formed.—The establishment of the Fred L. Adair Foundation of the American Committee on Maternal Welfare, Inc., was announced November 8 at a dinner given for Dr. Fred L. Adair, a leader in obstetrics in Chicago for the past 20 years, at the Quadrangle Club of the University of Chicago. In addition to being a tribute to Dr. Adair, the occasion was also a going-away party, as Dr. and Mrs. Adair are leaving Chicago to make their home in Florida. Dr. Adair has made a lasting contribution to the improvement in the care of the mothers and babies of the world. He was Mary Campau Ryerson Professor and chairman of the department of obstetrics and gynecology of the University of Chicago and chief of service at Lying-In Hospital for 13 years. He was chairman of the Joint Maternal and Welfare Committee from its founding, in 1937, until 1948, when he became its honorary chairman. He has also been president of the American Committee on Maternal Welfare, Inc., since its incorporation in 1934 ofter 15 years of

operation as an unincorporated committee with Dr. Adair as its chairman. It is ths last group which is the parent organization of the Fred Lyman Adair Foundation. This foundation is a fund-raising subsidiary formed to facilitate the collection of donations for research and education in better care for all women, particularly in reference to their reproductive functions, and infants before and after birth. The American Committee on Maternal Welfare, Inc., is a national organization which includes medical groups and public health and nursing organizations. Its members are representatives of 26 separate societies, for which it acts as a clearinghouse or coordinating agency. Its offices are at 116 South Michigan Avenue.

Changes in Faculty at Illinois.—Appointment of four to the clinical faculty of the University of Illinois College of Medicine with professorial rank has been announced by Dean Stanley W. Olson.

Dr. Joseph P. Weinmann has been appointed professor of oral pathology. He has been a staff member of the College of Dentistry since 1946, holding the rank of professor of pathology. Dr. Weinmann is the author of more than 80 scientific articles on histology, pathology, and physiology of the oral cavity. Dr. Weinmann is a medical graduate of the University of Vienna.

Mr. Oren C. Durham has been named lecturer in allergy with the rank of assistant professor. He has held the position of chief botanist at Abbott Laboratories since 1925. His primary interests have concerned field and atmospheric research on pollens and fungus spores.

Dr. Daniel J. Pachman has been appointed as clinical assistant professor of pediatrics. A medical graduate of Duke University, Dr. Pachman has taught at Duke, the University of Chicago, and at Northwestern University.

Dr. Edward Press has been appointed as assistant professor of preventive medicine. He presently holds a full-time appointment as associate director of the University of Illinois Division of Services for Crippled Children. He received the doctor of medicine degree from New York University and the master of public health degree from Harvard, and is the author of many scientific articles on public health and pediatrics.

Promotion of five members of the clinical faculty of the University of Illinois College of Medicine from the rank of assistant professor to associate professor has been announced by Dean Stanley W. Olson. Eleven others have been promoted from associate to assistant professor, and 12 from instructor to assistant professor.

Promoted from clinical assistant professor to clinical associate professor are the following:

Medicine—Drs. Stuyvesant Butler and Alva A. Knight.

Orthopaedic Surgery—Dr. F. G. Murphy.

Surgery—Dr. Stanley E. Lawton.

Promoted from assistant professor to associate professor:

Public Health—Dr. E. A. Piszczek.

Promoted from clinical associate to clinical assistant professor are the following:

Medicine—Drs. Herbert C. Breuhaus, I. I. Ritter, A. H. Rosenblum, and G. C. Turner.

Orthopaedic Surgery—Drs. William A. Marshall, Leo F. Miller, Fred Shapiro, and Horace E. Turner.

Pathology—Drs. Aaron Learner, C. C. Mason, and C. L. Pirani.

Promoted from clinical instructor to clinical assistant professor are the following:

Medicine—Dr. Willard G. DeYoung.

Ophthalmology—Drs. H. Isabelle McGarry and Edward A. Pushkin.

Orthopaedic Surgery—Dr. J. D. Farrington.

Pediatrics—Dr. Anne Bohning.

Psychiatry—Drs. Marjorie C. Meehan and Erich Paschkes.

Radiology—Dr. John W. Clark.

Surgery—Drs. C. David Brown, W. G. Diffenbaugh, and Harold A. Roth.

Promoted from instructor to assistant professor:

Public Health—Dr. Kenneth Morse.

Two members of the Department of Surgery at the University of Illinois College of Medicine, Dr. Vernon C. David and Dr. R. J. E. Oden, have been given emeritus status by the UI Board of Trustees upon reaching their 68th birthdays.

Dr. David has held the rank of Rush Clinical professor of surgery in the College of Medicine since 1941. He previously served on the faculty of Rush Medical School since 1910 when he was appointed an assistant in surgery. He was promoted to clinical professor in surgery and chairman of the department in 1949. He is a graduate of Rush, class of 1907.

Dr. David was presented with honorary doctor of science degrees by Northwestern University and the University of Michigan in 1948 and 1950, respectively. He has served as president of the American Surgical Association, Chicago Surgical Society, Western Surgical Association, and the American Board of Surgery, and was vice-president of the American College of Surgeons.

Dr. Oden, clinical associate professor of surgery, has been a member of the UI faculty since 1925, when he began teaching anatomy. He graduated from University Medical College at Kansas City, Mo., in 1906.

Since 1919, Dr. Oden has been an attending surgeon on the staff of Augustana Hospital.

Staff Promotions at Northwestern.—Promotions for eight staff members of the Northwestern University Medical School were announced December 8 by Dr. Richard H. Young, dean.

The promotions included three to full professorships: Dr. Thomas Cyrus Galloway to professor of otolaryngology. Dr. Harold Augusta Sofield to professor of bone and joint surgery and Dr. Joseph

A. Wells to professor of pharmacology. In addition to being members of the Northwestern medical staff, Dr Sofield is head of the Shriners Hospital for Crippled Children, and Dr. Galloway is on the staff of the Evanston Hospital.

The other five promotions were for Dr. Louis B. Newman to associate professor of physical medicine, Dr. Louis W. Sauer to associate professor of pediatrics, Dr. Eugene S. Talbot, Jr., to associate professor of medicine, Dr. John E. Kearns, Jr., to assistant professor of surgery and Dr. Theron Randolph to associate in medicine.

Scholarships Awarded.—Four students who have attained high scholastic standing have been awarded Rea Scholarships by the University of Illinois College of Medicine. Recipients of the scholarships are Morton S. Comess, Robert E. Lee, Bert G. Leigh, and Harold A. Shafter.

The scholarships carry a stipend of $250 each. Their purpose is "to help pay the tuition fees of needy students." Scholastic standing, character, and financial need are considered in making the awards.

Shafter, Comess, and Lee currently rank highest scholastically in the second, third and fourth-year classes, respectively, of the College of Medicine. Leigh holds high scholastic rank in the Fourth-year class.

The scholarships are the result of a bequest from Prof. Robert Laughlin Rea, who willed $5,000 to the College of Physicians and Surgeons in 1899. The fund was transferred to the University of Illinois when it took over the facilities and records of the College of Physicians and Surgeons in 1913. Ruth B. Geyer and Rudolph E. Wilhelm, fourth-year students at the University of Illinois, have been awarded Yarros scholarships for 1950-51, Dean Stanley W. Olson has announced.

The scholarships carry a stipend of $150 each. Needy and deserving students in the College of Medicine are eligible for the scholarships.

The scholarship fund was established at the University of Illinois is honor of the late Dr. Rachelle S. Yarros by her husband, Mr. Victor S. Yarros of LaJolla, Cal. Prof. Yarros taught obstetircs and social hygiene at the College of Medicine prior to her retirement in 1938. Allen H. Lefstin, a third-year student at the University of Illinois, has been awarded the Ralph C. Berkelhamer scholarship for 1950-51.

Lefstin holds high scholastic rank in the College of Medicine and has been elected to Alpha Omega Alpha, international honorary medical fraternity.

The scholarship, carrying a stipend of $100, was established four years ago by the Berkelhamer family of Chicago, in honor of the late Dr. Ralph C. Berkelhamer, who died while serving as a medical officer on Bataan. Students who have completed at least one year in the College of Medicine are eligible for the scholarship. The Berkelhamer family has stipulated that the scholarship may be awarded "to any needy and deserving student, with no prejudice as to race or religion."

Creation of Human Energy to be Studied Through Grant to Northwestern.—Northwestern University has received a grant of $4,500 from the Rockefeller Foundation, New York, for study of the creation of energy in the human body, it was announced recently. Dr. I. M. Klotz, Northwestern professor of chemistry and biology, will direct the research.

University scientists will investigate the processes by which chemical fluids in the human body combine with food particles to produce energy.

Dr. Klotz, member of the Northwestern faculty since 1942, has conducted extensive studies on the effect of drugs on the energy-creating process. He received the Army-Navy Certificate of Appreciation for research during World War II, and in 1949 was presented the American Chemical Society's Eli Lilly Award in Biochemistry.

New Program for Nurses Offered by Northwestern.—Northwestern University's Medical School recently announced a new program for nurses which offers a bachelor of science degree in nursing in addition to the diploma in nursing.

Dr. Theodore R. Van Dellen, assistant dean of the Medical School, emphasized that there has been a definite need for such a program. "This course of training will make it less difficult for women students in nursing to obtain a bachelor of science degree," he said. 'The plan will provide better education for surses and at the same time will speed up the course of training."

Candidates for the new degree must have 90 quarter hours in an accredited university and must complete three calendar years in one of the Schools of Nursing affiliated with Northwestern University. These are Wesley Memorial Hospital and Passavant Memorial Hospital, both located on the Chicago Campus, and Evanston Hospital, Evanston, Ill.

Under the new program residence in Northwestern's College of Liberal Arts is not required. Credit from any accredited university will be accepted but work in English, chemistry, and biology is required.

In addition, Northwestern offers two other nursing programs. In one, students may obtain the diploma of a graduate nurse by spending three years in one of the three hospitals affiliated with Northwestern. The second program, leading to a bachelor of science degree and a nursing diploma, requires that students have two years of liberal arts credits before entering the School of Nursing. Under this plan, students must spend one of the two years in Northwestern's College of Liberal Ars.

The new program, formulated by the Council on Nursing Education, was requested by the Northwestern Senate last June. Dr. John H. Annegers, assistant professor of physiology, is the coordinator and director of the program in nursing, under Dr. Van Dellen, director of the newly created Division of Auxiliary Medical Services.

Council members who planned the program include Dr. Richard H. Young, Medical School dean;

Dr. Van Dellen, Dr. Annegers, Dr. E. T. McSwain, dean of Northwestern's University College; and Directors of Nursing Miss Edna S. Neuman, Wesley Memorial Hospital; Miss Elizabeth Odell, Evanston Hospital, and Miss Mariam Rand, Passavant Memorial Hospital.

LAKE

Dr. Petter Receives Jaycee Award.—Dr. Charles K. Petter, Waukegan, medical director of the Lake County Tuberculosis Sanatorium, and secretary of the Illinois Tuberculosis Association, was named "Man of the Month" by the Waukegan-North Chicago Junior Chamber of Commerce, in September. Selection of Dr. Petter for the September "Man of the Month" was made on the basis of his "outstanding work at the sanatorium and his untiring efforts in safeguarding the health of the public," Brad West, certificate committee chairman announced. The certificate was awarded to Dr. Petter at the Jaycee dinner in December.

The tuberculosis death rate has declined from 38 per 100,000 in 1938 when Dr. Petter went to Waukegan to look over the TB program to 13 per 100,000 at present, West said. During Dr. Petter's twelve years as head of the county tuberculosis program the incidence of infection to school children has dropped from 25 per cent to 8 per cent. Also cited in the award was Dr. Petter's work in patient education at the sanatorium. Since its inception in 1943, three patients have received high school diplomas, three have received grade school diplomas, and several are taking college correspondence courses.

LA SALLE

Fifty Year Member.—*Dr. Harry S. Lester, Streator, was presented with in insignia of the Fifty Year Club of the Illinois State Medical Society at a meeting of the La Salle County Medical Society, November 11. The presentation was made by Dr. Joseph O'Neill, Ottawa. Dr. Paul M. Fox, Chicago, was the principal speaker.*

MACON

Society News.—Dr. Hampar Kelikian, Chicago, discussed "Stasis Problems of Lower Extremities" before the Macon County Medical Society, November 28.

MADISON

General Practice Chapter Established.—*The Helvetia Chapter of the American Academy of General Practice was created at a meeting, November 15, in Highland. Officers are Dr. R. L. Holcombe, Highland, president; Dr. C. E. Molden, Troy, vice president; and Dr. Cecilia Hellrung, Edwardsville, secretary-treasurer.*

PIATT

Ninety-Two Years of Age.—*Dr Warren E. Burgett, Bement, observed his ninety-second birthday in November. Dr. Burgett, who was born in Woodside, has been practicing medicine for more than sixty-two years. He has been a member of the Fifty Year Club since 1944.*

SANGAMON

Society News.—Dr. Eric Oldberg, Chicago, gave a discussion on "The Spinal Cord" before the Sangamon County Medical Society, in Springfield, December 7.

Personal.—At a recent meeting of the Council of the Illinois State Medical Society, Dr. Harrison C. Blankmeyer, Springfield, was voted to emeritus membership.

SCOTT

Society Election.—The Scott County Medical Society elected the following officers for 1951: president, Dr. Paul White; president-elect, Dr Preston E. Gibson; vice president, Dr. Walter Balzer; secretary, Dr. Harry B. Weinberg; treasurer, Dr. F. Dale Wilson; historian, Dr. William S. Binford; representatives to the executive committee: Drs. M. J. Brown, R. A. Berger, T. W. McMeans, W. E. Foley and James Bishop.

WILL—GRUNDY

Society Election.—Dr. Emil Viskocil, Lockport, was chosen president of the Will Grundy County Medical Society recently, to succeed Dr. Theodore Z. Polley, Joliet. Other officers are Dr. George McCabe, Morris, vice president; Dr. H. Wehrspann, secretary-treasurer; Dr. Richard Calosio, sergeant-at-arms; Dr. Joseph L. Trizna, vice president-elect; and Dr. Robert Stephen as secretary-elect, meaning they will take these posts next year. Drs. Wehrspann, Calosio, Trizna and Stephens are all of Joliet. Selected as delegates to the Illinois State Medical Society were Dr. Bernard Klein and Veheh M. Seron with Dr. Robert Lennon and Dr. Calosio as alternates. On the board of censors are Dr. Charles Willson, Wilmington; Dr. L. J. Wilhelmi and Dr. Arthur H. Fahrner. Drs. Klein, Seron, Lennon, Wilhelmi and Fahrner are also of Joliet.

WILLIAMSON

Personal.—Dr. A. W. Miller has assumed duties as superintendent of Herrin Hospital, Herrin, succeeding Dr. D. E. Robinson, who resigned to take on special work in radiology in Kansas City, Mo.

HEALTH DEPARTMENT ACTIVITIES

Health Report Available.—The thirty-second annual report of the Illinois Department of Public Health, covering the year ended June 30, 1949, has recently been made available. The report reviews the activities of the various divisions of the department.

Low Maternal Death Rate.—*Maternal deaths reached a new low in Illinois during the first five months of 1950, the bureau of statistics of the state* Department of Public Health has announced.

Up to June 1 only 36 deaths of mothers in childbirth occurred as against 60 for the corresponding period of 1949. This gives the state a rate of five maternal deaths for every 10,000 live births.

During the same 1950 period a national rate of maternal mortality was seven per 10,000 live births according to reports from the national office of vital statistics.

Statisticians pointed out that the present day maternal death record borders on the "remarkable" in view of the fact that a few years ago there was widespread belief that maternal mortality would never fall below 10 per 10,000 live births.

This favorable experience in Illinois, the health department reports, is evidence of very high standards of maternal care and obstetrical practice being maintained throughout the state. The decline is also a credit to mothers who have had the wisdom to make use of such modern medical safeguards as good prenatal care and medical attendance in childbirth.

GENERAL

Malcolm MacEachern Honored.—Officers, regents, and past and present members of the administrative staff of the American College of Surgeons held a dinner at the Drake Hotel, Chicago, November 19, in honor of Dr. Malcolm T. MacEachern, Director Emeritus of the College, upon the occasion of his retirement.

Dr. MacEachern began his service with the American College of Surgeons in August, 1923, as Director of Hospital Activities. From 1935 to 1949 he was Associate Director and Chairman of the Administrative Board. In 1949 he was appointed Director. In March, 1950, he assumed his present title of Director Emeritus when he was succeeded as Director by Dr. Paul R. Hawley, but he remained in charge of the hopsital activities of the College until the end of October.

Dr. MacEachern will continue his duties as Professor and Director of Northwestern University's Program in Hospital Administration which he established in 1943. He also continues as Chairman of the Tri-State Hospital Assembly whose 1951 annual meeting will be held in Chicago April 30, May 1 and 2, and as Director of the Chicago Institute for Hospital Administrators sponsored by the American College of Hospital Administrators which will be held next September.

Eli Lilly Entertains Medical Students.—Students and members of the faculty of Northwestern University Medical School were guests of Eli Lilly and Company, November 19-21. The program included a tour of the company, a tour to Indianapolis, special dinners and lectures.

Officers of District Medical Association.—Dr. Benjamin Markowitz, Bloomington, was elected president of the Northern Illinois Medical Association at a meeting in Peoria, November 2. Other officers are Dr. David Murphy, Dixon, and Dr. Raymond E. Davies, Spring Valley, vice presidents; and Dr. George A. Discus, Streator, secretary-treasurer. The reelection of Dr. Discus marked his fifty-first consecutive term.

Joint Meeting of Pathologists.—At a joint meeting of the North Cenral Region College of American Pahologists and the Illinois Society of Pathologists in Chicago, December 2, the following speakers, among others, participated: Dr. Clarence Cohn, "Clinical Theory of Flame Photometry"; Dr. Rachmiel Levine, "Physiologic Basis for the Therapeutic Use of Cortisone and ACTH"; Dr. Henry Guterman, "The Measurement of Urinary Steroid Hormones: Principles and Applications"; Dr. Karl Singer, "The Pathogenesis of Sickle Cell Disease"; Dr. Edwin Hirsch and Dr. William B. Wartman acted as moderators in a seminar on a group of selected cases.

Special Training Course.—A special four-week training course for employment and placement counselors working with cerebral palsied and other severely handicapped workers will be held March 12 through April 6 in New York, according to Lawrence J. Linck, executive director of the National Society for Crippled Children and Adults.

The program — which is the fourth to be offered under the joint sponsorship of the Alpha Gamma Delta International Women's Fraternity and the National Society — will be given at the Institute of Rehabilitation and Physical Medicine of the New York University-Bellevue Medical Center under the auspices of the school of education of New York University.

Designed to help meet the employment problems of handicapped workers, the program will be under the guidance of staff members of the Institute, the university's school of education and other specialists in this work. Upon satisfactory completion of the course, six hours of graduate credit in education will be granted by the university.

Training will include case studies and evaluations, clinical study and observation, lectures by outstanding authorities on medical and psycho-social aspects of the problem, counseling tools and techniques, placement tools and techniques, and vocational training. Counselors will also have an opportunity to visit rehabilitation and treatment centers to obtain first-hand knowledge of the problems involved.

Persons wishing to receive a fellowship must make formal application by Jan. 26, 1951. Applications and further information may be obtained from the National Personnel Registry and Employment Service of the National Society for Crippled Children and Adults, 11 South LaSalle Street, Chicago 3, Ill.

DEATHS

BRIG. GEN. BENEDICT ARON, Chicago, who graduated at Chicago College of Medicine and Surgery in 1916, died December 7, aged 63. He was former surgeon-general of th Illinois Reserve Militia.

JOSEPH D. CAIN, retired, formerly of Chicago, who graduated at Central College of Physicians and Surgeons, Indianapolis, in 1897, died recently in his home at Whitehall, Michigan.

CARL B. DAVIS, Winnetka, who graduated at Rush Medical College in 1903, died December 11, aged 73. He was formerly professor of surgery at the University of Illinois College of Medicine.

JOHN A. GRAHAM, Chicago, who graduated at Rush Medical College in 1902, died November 19, aged 70.

He was chief surgeon emeritus and member emeritus of the board of trustees of Henrotin Hospital.

NOEL E. GORDON, Minonk, who graduated at the University of Illinois College of Medicine in 1930, died *November 2, aged 47. He had been in ill health for* several years.

FRED W. JONES, Alton, who graduated at the University of Illinois College of Medicine in 1905, died at Tavernier, Fla., November 15, aged 70. He had practiced medicine in Alton for many years.

CHARLES W. LAMB, Forest Park, who graduated at Jenner Medical College in 1910, died September 11, aged 71, of carcinoma of the tongue.

JAMES H. MCCLURE, Chicago, who graduated at Meharry Medical College, Nashville, in 1916, died *October 31, aged 67.*

HENRY S. SHERMAN, Chicago, who graduated at *Rush Medical College in 1917, died October 27, aged* 60. He had practiced medicine in Chicago for 30 years, *was attending physician at Mt. Sinai Hospital and on* the staff of Chicago Medical School.

RAYMOND E. USSERY, Ava, who graduated at Kentucky University Medical Department, Louisville, in 1903, died November 27, aged 81.

HENRY ABRAHAM UTTER, Harrisburg, who graduated at the University of Arkansas School of Medicine, Little Rock, in 1936, died August 19, aged 40.

ROGER T. VAUGHAN, Chicago, who graduated at *Rush Medical College in 1903, died November 12, aged* 72. He had been night supervisor of Cook County Hospital *for 37 years.*

STANLEY R. WALKER, Chebanse, who graduated at Queen's University Faculty of Medicine, Kingston, Ontario, in 1889, died December 1, aged 87. He had been mayor of Chebanse for 30 years.

ROBERT YOUNG, Hoopeston, who graduated at Columbia University College of Physicians and Surgeons, *New York, in 1949, died September 25, aged 25, of* coronary occlusion.

"FOR THE COMMON GOOD"

Woman's Auxiliaries Observe Health Talk on TV.—December 13 marked the second year of Health Talk on WGN-TV. The telecast, produced by the Educational Committee of the Illinois State Medical Society, was open to a studio audience which included numerous members of the Radiological Society of North America who were in annual session at the Palmer House. "If the Bomb Strikes" was the title of the program which featured, A. C. Ivy, Vice President in Charge of the Chicago Professional Colleges of the University of Illinois; Roger Harvey, professor and head of the department of radiology, at Illinois; William G. Faraghan, Atomic Energy Commission Fellow at Illinois, and Theodore R. Van Dellen.

Brig. General James P. Cooney, Washington, D. C., made a guest appearance on the telecast. Asked for his thoughts on the possibility of a bomb being dropped, he said that the chances were remote, but that it was better to hope for the best and prepare for the worst.

The Woman's Auxiliary to the Chicago Medical Society presented a birthday cake to observe the anniversary of Health Talk. Presentation was made by Mrs. Morris Friedell, and Mrs. M. F. Stein, public relations officer and president, respectively. Dr. Ford K. Hick, Co-Chairman of the Educational Committee accepted for the committee, and Dr. Van Dellen for WGN-TV.

A congratulatory telegram was also sent to the Committee by the Woman's Auxiliary to the Illinois State Medical Society.

The medical profession of Illinois will be interested to know that Jack Mabley of the Chicago Daily News again mentioned Health Talk as among the recommended programs on television, as did the Annual School Broadcasting Conference which met in Chicago, December 12-15. Other telecasts presented since the last issue of the Illinois Medical Journal were:

Building a New Life (repeat), Louis B. Newman and two veterans from Hines Veterans Administration Hospital.

Your Nails in Health and Disease, Cleveland J. White, November 29.

The Common Cold (repeat), Clayton Loosli, December 6.

Your Doctor Speaks over WFJL, Thursday evenings, at 7:30 carried the following transcribed broadcasts under the auspices of the Educational Committee:

Clarence A. Newmann, November 30, Growing Old Gracefully.

J. J. Callahan, December 7, Fractures.

Albert Van Der Kloot, December 14, Diabetes Mellitus in Children.

Warren H. Cole, December 21, Appendicitis.

"You and Your Baby" over Station WAAF, Tuesday mornings at 10:30 a.m., presented the following physicians in live broadcasts under the auspices of the Educational Committee:

Alva Newcomb, November 21, A Baby Boy is Born.

John M. Reichert, November 28, Taking the Baby Home.

Eugene T. McEnery, December 5, Breast Feeding.

Eva J. Line, December 12, The Bottle Fed Baby.

"Here is Your Doctor" over Station WCFL, Saturday mornings at 11 a.m., presented the following physicians in transcribed broadcasts under the auspices of the Educational Committee:

Edwin A. Balcer, November 25, Postoperative Care.

Harry H. Boyle, December 9, Immunization Procedures in Childhood.

Percy E. Hopkins, December 16, Appendicitis.

Noah D. Fabricant, December 23, The Common Cold.

Lectures Arranged Through the Educational Committee:

Career Conference, December 27-29, at the Illinois Institute of Technology, under the sponsorship of the Chicago Sun-Times and the Chicago Technical Societies Council:

Francis Manlove, assistant secretary, Council on Medical Education and Hospitals, AMA.

Richard Young, dean, Northwestern University Medical School.

John J. Sheinin, dean, Chicago Medical School.

F. J. Mullin, Ph.D., dean of students, Division of Biological Sciences, University of Chicago.

Stanley Olson, dean, University of Illinois College of Medicine.

Y. T. Oester, head of the department of pharmacology, Stritch School of Medicine of Loyola University.

John A. Mart, Pulaski PTA, January 3, in Chicago, What Causes Heart Disease.

Hugh A. Flack, Toman Library Forum, January 12, on Knowing Your Heart.

Herbert E. Schmitz, West Side Branch, Woman's Auxiliary, Chicago Medical Society, January 19, in River Forest, on Recent Advances in Cancer.

William M. Lees, Norwegian Women's Club, February 7, on Modern Trends in Cancer Research.

George E. Wakerlin, Young Married Couples Sunday Evening Club, February 11, on Animal Experimentation for Medical Advancement.

Eugene L. Slotkowski, Millard Avenue Junior Woman's Club, February 21, on Child Care.

George A. Hellmuth, Forest Ridge Women's Club, February 21, on Heart Disease.

Lectures Arranged by the Scientific Service Committee:

John J. Brosnan, Chicago, Effingham County Medical Society in Effingham, January 11, on Diagnosis and Treatment of Chest Diseases.

Jesse A. Stocker, Springfield, Macoupin-Montgomery County Medical Societies in Carlinville, January 23, on Recent Trends in the Surgery of Tuberculosis.

John B. O'Donoghue, Chicago, Macon County Medical Society in Decatur, January 23, on Acute Abdominal Emergencies.

Herbert E. Landes, Chicago, La Salle County Medical Society in La Salle, February 8, on Hematuria.

Frank B. Kelly and James A. Campbell, both of Chicago, Will-Grundy County Medical Society in Joliet, February 13, on Prognosis and Treatment of Sub-acute Bacterial Endocarditis and Indications, Technique and Interpretation of Cardiac Catheterization, respectively.

Even though control measures are only one factor in the eradication of tuberculosis, they may very well be the decisive factor. Anything which will reduce the size of the reservoir of the tubercle bacillus in human beings will lessen the number of new cases of tuberculosis. Every case of the disease, actually or potentially infectious, which is discovered and brought under control is a step in reducing the size of this reservoir. A. C. Christie, M.D., Pub. Health Reports, June 2, 1950.

As in the case of other highly infectious diseases, the spread of tuberculosis can only be controlled by the isolation of the patients with active, sputum-positive infection from those who are susceptible to the disease but who have not yet contracted it. This is not being done and cannot be done among the American Indians for whom hospital accommodations are not provided by the Bureau of Indian Affairs and for whom funds are not available to expand the contractual service with non-government-operated sanatoriums. Fred T. Foard, M.D., J.A.M.A., February 4, 1950.

For your allergic patients... the antihistamine that gives

'Round-the-clock relief from 4 small doses

Decapryn's *long-lasting relief*,[1] combined with *low milligram dosage*,[2] makes it the ideal antihistamine for treating difficult allergies, or patients who have not responded to other drugs.

1. "Symptoms were relieved from 4 to 24 hours after the administration of a single dose of Decapryn—"... Sheldon, J.M. Et al: Univ. Mich. Hosp. Bull. 14:13-15 (1948)
2. "It was found that 12.5 mg. could be given during the day with comparatively few side reactions and yet maintain good clinical results—" ... MacQuiddy, E.L.: Neb. State M.J. 34:123 (1949)

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PHYSICAL MEDICINE ABSTRACTS

A CONCEPT OF POLIOMYELITIS BASED ON OBSERVATIONS AND TREATMENT OF 6,000 CASES IN A FOUR-YEAR PERIOD (CONCLUDED)

Albert G. Bower, M.D., and Associates, Pasadena, Calif. In NORTHWEST MEDICINE, 49:4:261, April 1950.

No tracheotomy should be performed without definite criteria and indications that it will benefit the patient. Such criteria are (1) Inability to maintain a free airway by the usual means at our disposal. (2) Signs of developing anozia not otherwise correctible. (3) Paralysis of one or both vocal cords. (4) Pulmonary edema or atelectasis. (5) Rarely, in order to apply positive pressure to increase otherwise totally inadequate vital capacity as measured by the respiratory ventilation meter.

Patients with respiratory inadequacy, due to involvement of the muscles of respiration, the intercostals, the diaphragm or both, must go into the respirator.

Do not feed patients by mouth while acutely ill in the early stages of poliomyelitis. To do so is to invite disaster because of extreme gastrointestinal atony which precipitates vomiting and distention in the presence of food in the stomach.

Obviously, we have only started to study the metabolic changes in poliomyelitis patients and further biochemic studies are imperative but at least these initial observations point the way. Future studies will determine the optimal supportive measures needed by seriously ill patients and will save lives in types not now surviving. We feel that intravenous fluids should supply both food and hydration during the early acute phase and these should contain adequate potassium, provided the urinary output is adequate. Too much normal saline is to be avoided. Dietary protein replacement must be started as soon as permissible and early repeated intravenous irradiated plasma infusions have been life-saving in seriously ill patients. Just as postsurgical cases are studied carefully to determine immediate needs, so must the critically ill poliomyelitis patient be followed by the laboratory to determine how best to support him over critical phases of illness.

SUMMARY

(1) Etiology, epidemiology, symptomology, direct and differential diagnosis of poliomyelitis were outlined.

(2) Newer aspects were discussed, concerning metabolic changes occurring during the acute phase of severely ill poliomyelitis patients, as reflected in markedly altered biochemic conditions found present in their blood. These biochemic alterations, hitherto undescribed, were analyzed by means of serial determinations of serum proteins and of the electrolytes of the blood and

(Continued on page 62)

"Infants have a particular claim to oral penicillin since they . . .
should be spared the pain and disturbance of injections."
Editorial, Brit. M. J. 2:962, 1947

'ESKACILLIN 100', containing 100,000 units of penicillin per teaspoonful (5 cc.), and 'ESKACILLIN 50', containing 50,000 units of penicillin per teaspoonful—are the ideal penicillin preparations for infants and children because they can be given by mouth . . . and are so pleasant-tasting.

Among the many indications for ESKACILLIN are:

Acute sinusitis	**Pneumonia**
Bronchitis	**Cellulitis**
Tonsillitis	**Gonorrhea**
Otitis media	**Certain skin infections**

Eskacillin 100
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the unusually palatable liquid penicillins for oral use

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urine. They will be published in detail elsewhere.

(3) Where feasible, an attempt was made to correlate these biochemic changes with those of the clinical disease and to point out the usefulness of such determinations as a guide to therapy.

(4) Treatment was discussed from the conventional standpoint, as well as from the standpoint of utilizing newly obtained information and newly designed equipment. By virtue of increased knowledge of the pathologic physiology in poliomyelitis, it has been possible to improve existing equipment for mechanical respiration and more efficiently to combat abnormal biochemic changes occurring within the body of the patient as a result of the catabolic phase of injury due to the overwhelming action of the invading poliomyelitis virus.

(5) The need for additional studies to be merely beginners.

THE EFFECT OF MICROWAVES ON BONE AND BONE MARROW AND ON ADJACENT TISSUES

Joseph P. Engel, M.D., J. F. Herrick, Ph.D., Khalil G. Wakim, M.D., Ph.D., John H. Grindlay, M.D., and Frank H. Krusen, M.D., Rochester, Minn. In ARCHIVES OF PHYSICAL MEDICINE, 31: 7:453, July 1950.

Microwave diathermy was applied to the legs of anesthetized and trained dogs, and temperature measurements were taken before and after irradiation by means of thermistors and thermocouples placed into the adjacent soft tissues and into the bone cortex and bone marrow of the upper third of the tibia.

When submuscular bone was exposed to microwaves for a period of thirty minutes, the average increases of temperature were 4.3 degrees (C.) in the subcutaneous tissues, 4.6 degrees in the overlying tibialis anterior muscle, 3.8 degrees in the tibial cortex and 3.0 degrees in the tibial marrow. The average increase of rectal temperature was 0.3 degree.

When subcutaneous bone was exposed to microwaves for a thirty minute period, the average increases of temperature were 4.1 degree (C.) in the subcutaneous tissues, 5.0 degrees in the tibial cortex and 3.4 degrees in the tibial marrow, and 4.3 degrees in the adjacent gastrocnemius muscle. The average increase of rectal temperature was 0.2 degree.

Subcutaneously located bone was heated most effectively with microwaves when the rectangular director was placed parallel to the extremity.

Average rises of temperature of the leg tissues in trained dogs following exposure to microwaves were approximately 1 degree (C.) less than those obtained under similar procedures in anesthetized dogs.

When the lateral aspect of the leg was exposed to microwaves, higher temperatures were developed in the tibialis anterior, which overlies bone, than in the gastrocnemius, which does not overlie bone, provided the time of exposure did not exceed fifteen minutes.

An impedance-matching transformer placed in the field of microwave irradiation caused an increase in the tissue temperature of about 300 per cent over the values obtained when no transformer was used.

LATE SPONTANEOUS RUPTURE OF THE EXTENSOR

Edwin David Weinberg, M.D., Baltimore. In JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 142:13:979, April 1, 1950.

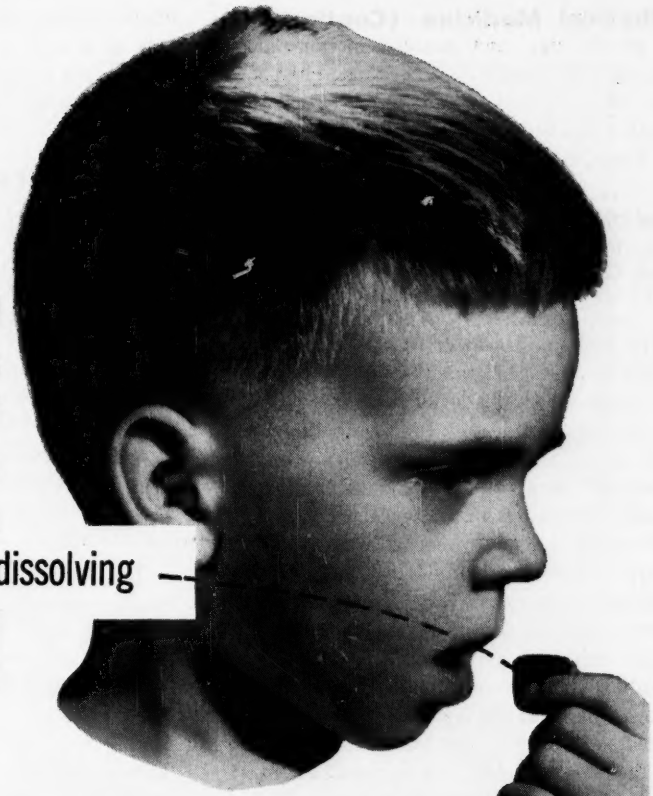
Subcutaneous rupture of a tendon at the wrist is uncommon. When the tendon is subjected to any great strain, either the periosteal insertion may give way and carry with it a fragment of bone or a rupture may occur at the musculotendinous junction. In order to rupture spontaneously the tendon must have been previously damaged by either trauma or disease. Late subcutaneous rupture of the extensor pollicis longus tendon following Colles' fracture is infrequent.

Treatment is surgical. Ideally, this consists of primary end to end suture. This may not be possible, however, because of the marked retraction of the divided tendon, the degree of adhesions or severe degenerative changes. When an end to end suture is not possible, various forms of tenoplasty have been used.

Postoperatively, a cast is applied, extending from below the elbow to the metacarpophalangeal joints and the tip of the thumb, with the wrist in a slight cock-up position and the thumb extended and elevated. The cast is bivalved on

(*Continued on page* 64)

20,000 units of penicillin in a slowly-dissolving hard candy base



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the twelfth day, and guarded motions are instituted. The cast is discarded about the fourth week, and exercise is gradually increased. Useful function can be obtained only by operation. On the whole, results have been satisfactory.

NEW DEVICE FOR DISABILITY EVALUATION:

F. A. Hellebrandt, M.D., Sara Jane Hantz, M.S., and L. E. A. Kelso, B.S., Richmond, Va. In ARCHIVES OF PHYSICAL MEDICINE, 31:4:207, April 1950.

The last of a series of upper extremity ergographs is described, and the technic of application is presented. The evidence suggests that the grip ergograph is a useful device in the management of a large variety of clinical conditions associated with hand weakness. Illustrative records are reviewed. They demonstrate that ergography may be used to assay the initial status of the patient, measure progress under treatment, determine the end point of effective therapy and evaluate the magnitude of residual disability. The values of ergography in the adjudication of compensation claims and the appraisement of therapeutic methods are discussed. In conclusion, attention is drawn to the fact that the ergograph serves a dual purpose, being equally efficacious as a mensuration and as a therapeutic device.

A TRICEPS-SUBSTITUTE BRACE FOR QUADRIPLEGICS

Henry R. Shear, M.D., and A. Estin Comarr, M.D., Van Nuys, Calif. In ARCHIVES OF PHYSICAL THERAPY, 31:8:518, August 1950.

The ultimate objective of the treatment of patients with spinal cord injuries is to render them as independent as possible. This task is particularly difficult in quadriplegics who are extremely helpless. Fortunately, the biceps musculature, with its higher segmental motor supply, is spared in many cases while the triceps function is abolished at the same time. The presented brace takes advantage of this condition and, by restoration the muscle equilibrium, allows for sufficient function of the elbow joint. In turn, this permits the use of eating utensils, combs, brushes, and such, so important in daily life and so significant a factor for the improvement of the known behavior pattern of patients with spinal cord injury.

Our brace has a threefold purpose: (a) It offers resistive exercise for the biceps; (b) it acts as a cock-up splint for the hand; (c) it furnishes a better holder for eating devices than that previously described.

FRACTURES OF THE FEMORAL SHAFT

Charles Rombold, M.D., H. C. Anderson, M.D., H. O. Marsh, M.D., and J. F. Lance, M.D., Wichita, Kansas. In THE JOURNAL OF THE KANSAS MEDICAL SOCIETY, 51:8:369, August 1950.

The two aspects which make fractures of the femoral shaft an important problem are the economic and treatment factors. The multiplicity of methods of treatment and the total lack of agreement among the advocates of each method, as well as the conflict of reported results of the various methods of treatment, indicate confusion in the strategy of the attack on this problem.

The usual period of recumbency and traction is three months, depending on age, reduction, etc., and largely on some unknown and unpredictable factor of healing of fractures. After adequate callus has been achieved the apparatus is removed and active and passive physical therapy begun. After a week in bed upsupported the patient is allowed to walk with crutches with or without an additional brace support to his thigh depending on the confidence of the surgeon in the union of the fracture. The period of protection following the removal of the traction usually is about three or four months.

In evaluating his end results the surgeon may well utilize a formula long in use. The factors of this formula are:

- Appearance
  - Visual
  - X-ray
- Function
  - Range of motion in knee
  - Shortening
  - Angulation
  - Subjective complaints
- Economic
  - Percentage of economic loss

In conclusion may we emphasize again that in our hands and as well in those of the average surgeon, skeletal traction is at present the method of choice in the treatment of fracture of the shaft of the femur.

(*Continued on page* 66)

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REMOVAL OF IMPACTED CERUMEN
AS AN ADJUNCT TO SYSTEMIC ANTI-INFECTIVE THERAPY
CONTAGIOUS DISEASE EAR INVOLVEMENTS

FORMULA: Glycerol (DOHO) ..... 17.90 GRAMS (Highest obtainable spec. grav.)
Antipyrine ..... 0.81 GRAMS
Benzocaine ..... 0.21 GRAMS

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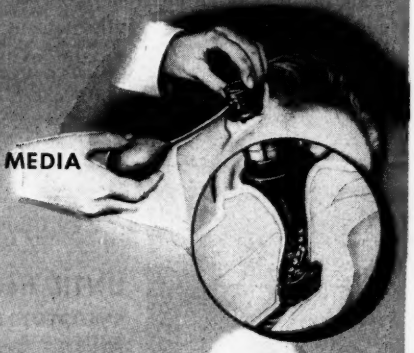

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FORMULA: Desoxyephedrine Saccharinate 0.50% w/v in an isotonic aqueous solution with 0.02% Laurylammonium saccharin. Flavored. pH 6.4.

PLEASANT—EFFICIENT
NON-TOXIC—BACTERICIDAL

Supplied in **THE DOHONY SPRAY-O-MIZER*** (Combination Spray and Dropper)
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Physical Medicine (Continued)

PROTECTION OF THE SKIN FROM SUNBURN: CORPORATION OF THE ABSORPTION SPECTRA OF SCREENING AGENTS AND THEIR EFFICACY IN ECZEMA SOLARE

Brian Russell, M.D., Lond., M.R.C.P., D.P.H., and Daphne Anderson, M.B. Lond., M.R.C.P. In THE LANCET, No. 6624, p. 247, August 12, 1950.

In the prevention of skin disorders caused by sunlight and the relief of those aggravated by light it is useful to know what spectral range of light must be excluded. In most of these disorders the wave-lengths concerned are shorter than 3300 A but longer than 2900 A, which is about the short wave-length limit of the summer sun in temperate zones. In this category fall acute and chronic solar dermatitis, light sensitization by sulphonamides and some other substances, zeroderma pigmentosum, and the initiation or aggravation of lupus erythematosus, herpes simplex recurrens, keratoses, and skin cancer. Most cases of eczema solare of Willan and summer prurigo of Hutchinson, which are now often grouped together as the "polymorphic light eruption" of Haxthausen, are also caused by this "sunburn spectrum", although in others violet and blue rays also play a part.

Protection against the sunburn spectrum is provided by a vanishing-cream type base containing tannic acid 5 per cent; quinine hydrochloride 5 per cent; pyribenzamine 5 per cent; sodium p-aminobenzoate 10 per cent; salol 10 per cent; or yellow soft paraffin 50 per cent. Any one of these creams may be used to prevent sunburn, but tannic acid is the first choice.

When these substances are used in the treatment of eczema solare and other light-activated diseases, a watch must be kept for skin tolerance to the light-screening active principle itself or to some component of the base. Almost any substance may occasionally cause contact eczema, but some are safer than others; of the above list, tannic acid is the most innocuous, followed by salol, sodium p-aminobenzoate, pyribenzamine, and quinine.

Sodium p-aminobenzoate should not be used

(*Continued on page* 68)

UNTIL her physician can observe and treat her symptoms, many a woman, even today, faces the failing fires of the menopause with confusion . . .

Physicians who are no longer satisfied with the limited action of replacement therapy alone, are electing to use a MORE COMPREHENSIVE TREATMENT for menopausal disturbances. Specifically designed for this purpose, Tablet Phen-Orivan, Dorsey provides, in addition to estrogenic substances:

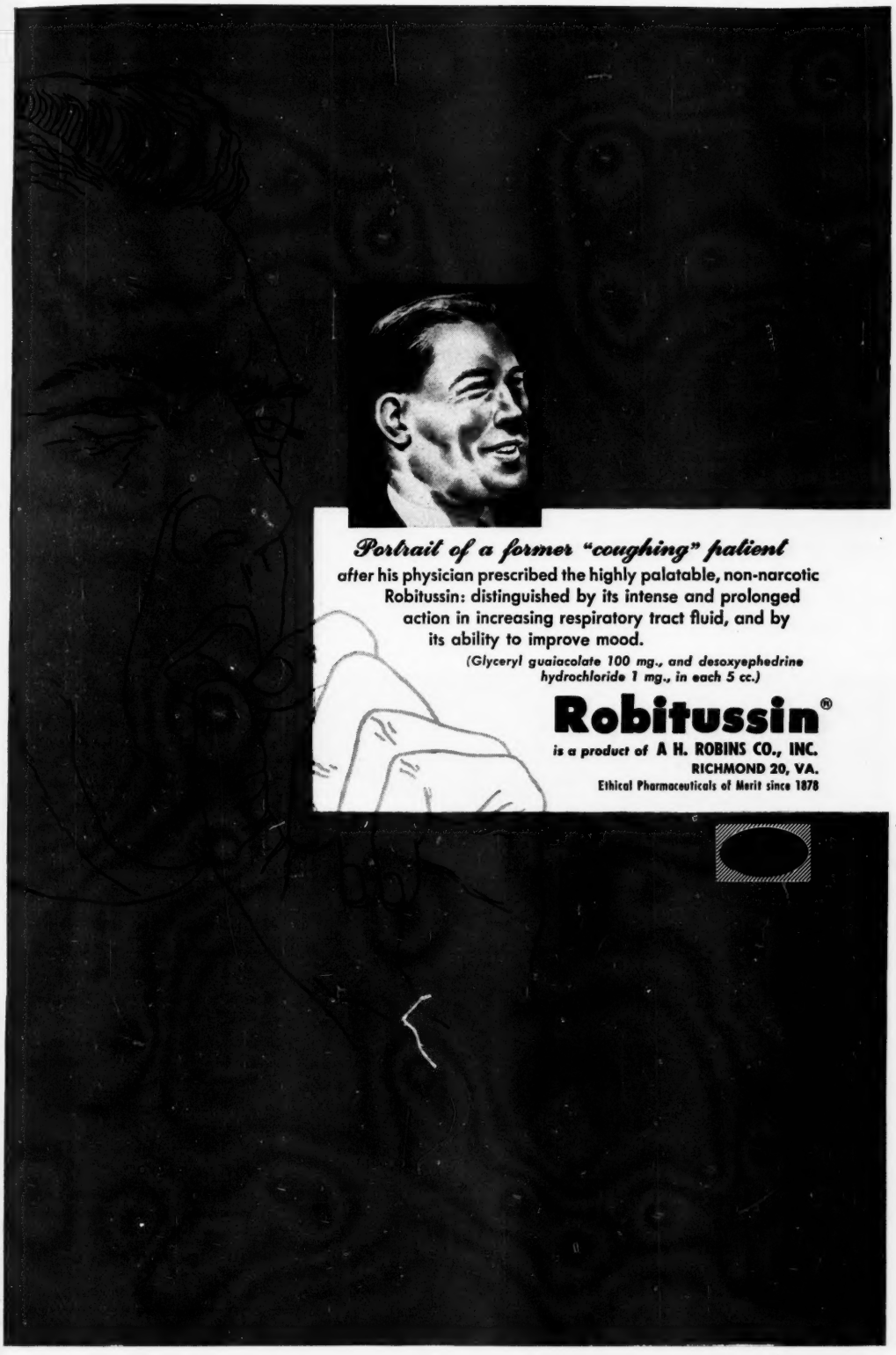
Thyroid to stimulate metabolism and promote a feeling of well being; phenobarbital and hyoscyamus to hasten relief by sedative and antispasmodic action.

EACH TABLET PHEN-ORIVAN, DORSEY CONTAINS:

Phenobarbital	¼ gr.
Thyroid	⅛ gr.
Ext. Hyoscyamus	⅛ gr.
Estrogenic substances from pregnant mares' urine, in their naturally occurring, water-soluble, conjugated form, expressed as sodium estrone sulfate	0.25 mg.

TABLET PHEN-ORIVAN, Dorsey

THE SMITH-DORSEY COMPANY, LINCOLN, NEBRASKA • BRANCHES AT LOS ANGELES AND DALLAS


Portrait of a former "coughing" patient
after his physician prescribed the highly palatable, non-narcotic Robitussin: distinguished by its intense and prolonged action in increasing respiratory tract fluid, and by its ability to improve mood.
(Glyceryl guaiacolate 100 mg., and desoxyephedrine hydrochloride 1 mg., in each 5 cc.)
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if there has previously been sensitization to sulphonamides or benzocaine.

Yellow soft paraffin is an effective screen when added to creams in proportions of 50 per cent or more, but its occlusive and "heating" properties may cause discomfort. In proportions of 25 per cent and less it does not screen but, on the contrary, has an intensifying effect in the sunburn spectral range.

The type of base used has a marked influence on the efficacy of light-screening agents. The vanishing-cream type of base is both effective and of good cosmetic quality.

In the more unusual cases of sensitization to the violet-blue region of the spectrum, these substances are ineffective and recourse must be had to physical screens, but these are only partially effective.

REHABILITATION OF THE LOWER EXTREMITY AMPUTEE IN A LARGE GENERAL HOSPITAL

Ward M. Schultz, M.D., New York City. In NEW YORK STATE JOURNAL OF MEDICINE, 50:17:2061, September 1, 1950.

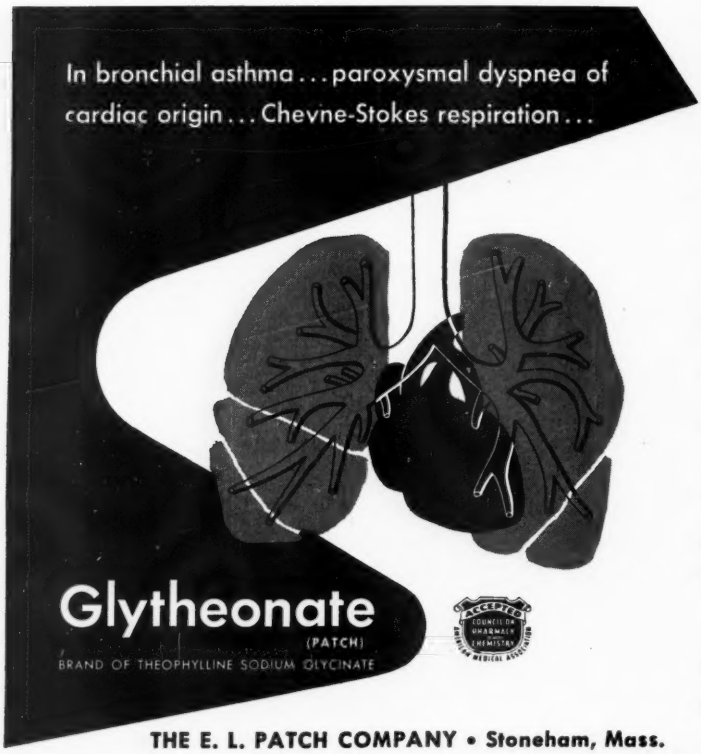
Rehabilitation of the amputees has been defined as the endeavor to achieve the maximum function and adjustment of the amputee and to prepare him physically, mentally, socially, and vocationally for the fullest life compatible with his abilities and disabilities. It is the objective at Bellevue Hospital not only to fill in the gap between surgeon and limb maker, but also carry the patient well beyond this stage so as to permit that patient the fullest possible life. The physician practicing physical medicine and rehabilitation at Bellevue learns the problems of the surgeon, develops an intimate knowledge of the types and working of available protheses, studies the problems of the limb maker, follows through with the training of the amputee on the Rehabilitation Wards, and evaluates his work potentialities.

From the analysis of the data presented, it appears that in a prosthetic program in a general hospital such as Bellevue the following conditions will be met:

(1) At least two-thirds of the amputees seen will be males.

(2) About 70 to 75 per cent of the lower

(*Continued on page 70*)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has the advantage of being more stable in air and less irritating to the gastric mucosa and "is thus tolerated in larger oral doses than are possible with other theophylline preparations, and it can be administered by mouth in liquid form as well as in tablets not enteric coated."*

Glytheonate (PATCH)

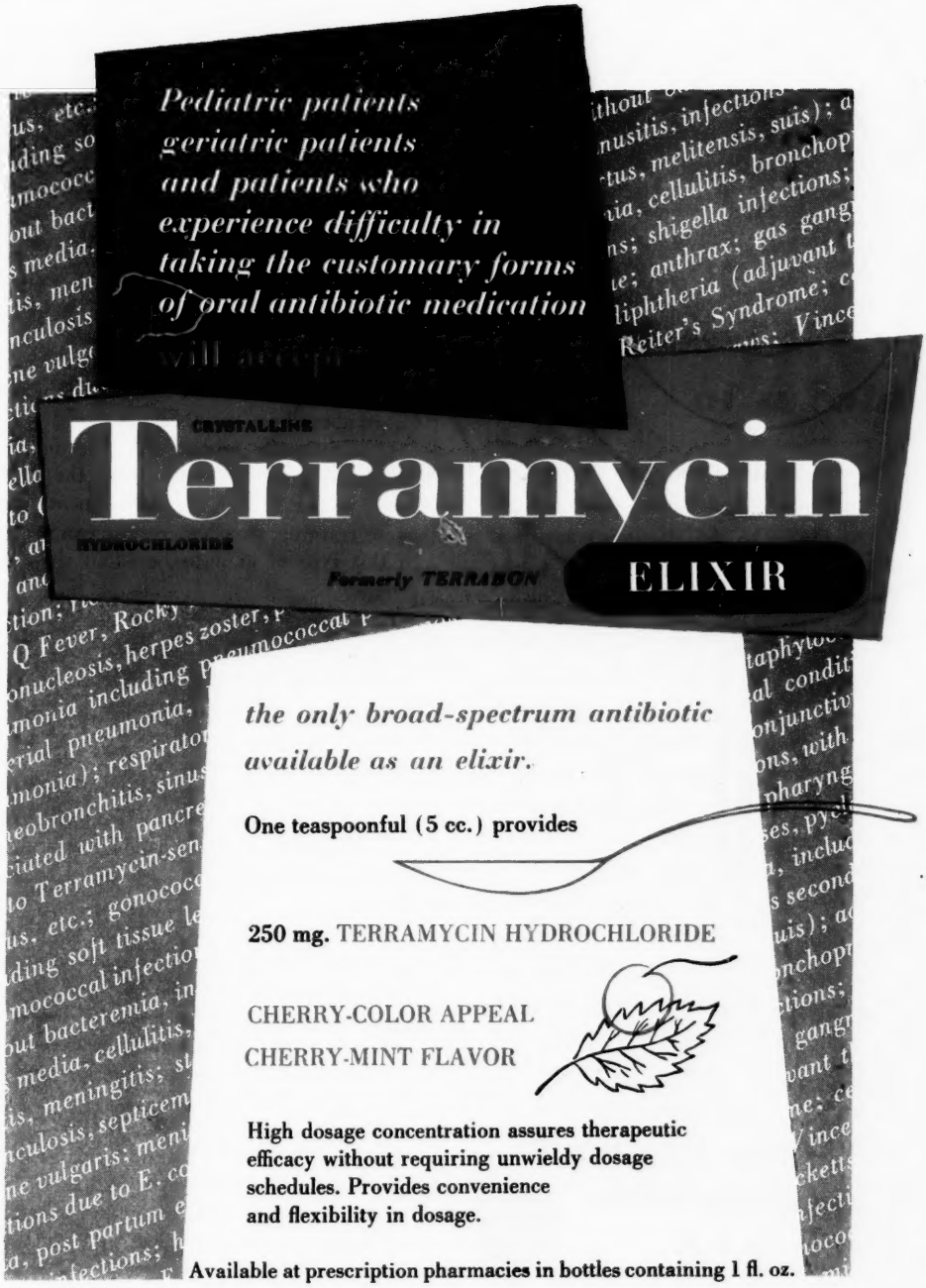
- relaxes the bronchioles and relieves bronchial spasm.
- acts as diuretic in congestive heart failure.
- stimulates the psychic areas and respiratory, vasomotor and vagus centers.
- stimulates the myocardium.

SUPPOSITORIES GLYTHEONATE: 0.78 Gm.

SYRUP GLYTHEONATE:
473 cc. and 3.78 liter bottles. A syrup containing 65 mg. of theophylline-sodium glycinate in each cc.

TABLETS GLYTHEONATE: 0.324 Gm.

*Council on Pharmacy & Chemistry: New and Nonofficial Remedies, 1950, Philadelphia, J. B. Lippincott Company, 1950, p. 285.



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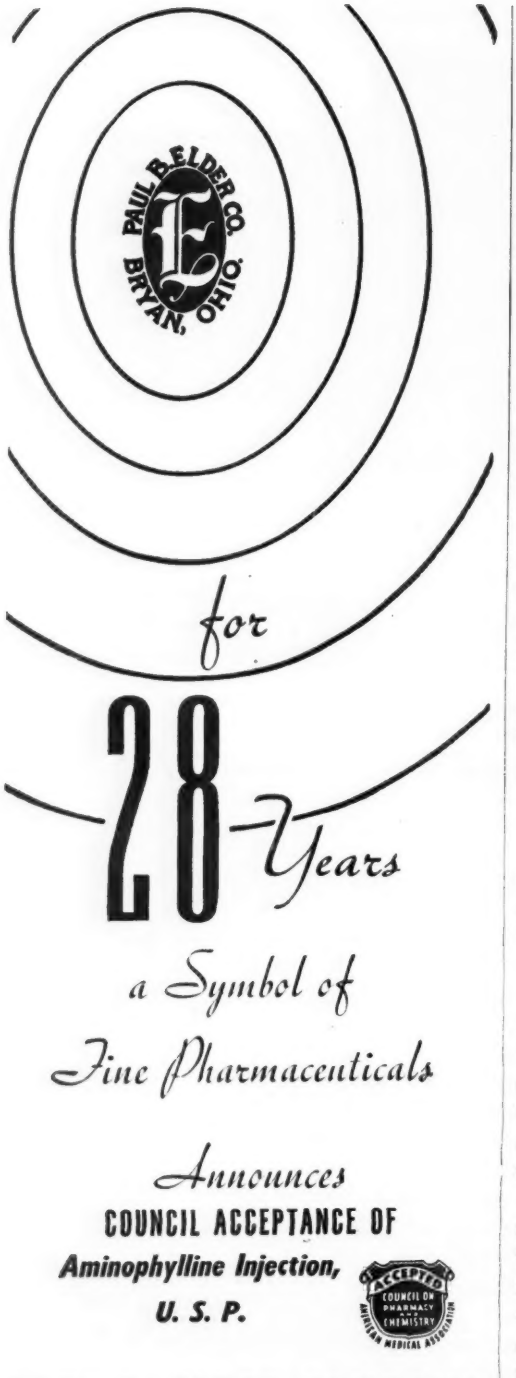

Physical Medicine (Continued)

extremity amputations will be due to peripheral arteriosclerosis with or without diabetes mellitus.

(3) About 50 per cent will be unilateral above-knee amputations and 25 per cent unilateral, below-knee amputations.

(4) At last 50 per cent cannot adequately use prosthetic appliances because of age, lack of skill, severe intercurrent disease, contractures, or unreliability of the patient.

(5) The ability to perform an adequate swing-through gait on crutches is a reliable test for the skill necessary to use an above-knee prosthesis.

(6) The degree of skill needed to use a below-knee prosthesis is much less than that required for an above-knee prosthesis.

(7) With the proper case selection, specific prosthetic prescription to meet the individual need, proper fitting and adjustment, and adequate training, excellent results can be obtained in this type of amputee, even in the older age groups.

CEREBRAL PALSY: MEDICAL CONSIDERATIONS AND CLASSIFICATION

Temple Fay, M.D., Philadelphia. In THE AMERICAN JOURNAL OF PSYCHIATRY, 107:3: 180, September 1950.

Cerebral palsy is a new field of medicine that has emerged in the last five years. It has grown so rapidly that the profession has scarcely had time to recognize it and become fully aware of its progress.

"Cerebral palsy" is a term popularized by Phelps and adopted by the lay public to designate types of paralysis, incoordination, tremor, and crippling effects that arise from lesions of the brain, in contradistinction to injuries or disease of the spinal cord, the peripheral nerves, or the extremities themselves.

The important objectives in this field chiefly concern diagnostic screening and rehabilitation. The lessons learned here, as well as those learned in the management of acute and chronic phases of cerebral trauma, tumors, and organic lesions of the brain arising in later life, have made possible combinations of physical therapy, pattern movements, and therapeutic exercises that are now known to the profession and have proved to be of benefit to the patient. Adults who suffer

(Continued on page 72)

at the first sign of a cold

Chill, blustery winter days are generally an indication of an increase in the incidence of colds, and the first warning signs of a cold are an indication for Cehistra 'Organon,' for it will provide many of your patients with prompt symptomatic relief. Cehistra combines in each effervescent tablet 10 mg. of prophenpyridamine (as the maleate), one of the most effective antihistamines available today, and 100 mg. of vitamin C, in itself valuable in helping the defense mechanism, together with 320 mg. (5 grs.) of aspirin for its analgesic and antipyretic actions, and several alkalizers. Cehistra tablets form in water a sparkling, pleasant-tasting solution of the active ingredients which assures prompt action. Cehistra is available for your prescriptions in vials of 10 effervescent tablets or individually foil-wrapped in quantities of 1000.

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Physical Medicine (Continued)

a cerebral accident or injury now have the benefit of the work already accomplished in the army rehabilitation centers and the classification, education, and vocational training so far established for children and young adults.

Diverse as the medical problem may be, greater problems exist in the fields of education and training. Here the physical therapist, the psychometrist, the speech therapist, and the occupational therapist, the social worker, and the trained rehabilitationist have attempted to solve the needs for the various ages and for various degrees of handicapping conditions. The educational and rehabilitation groups have been quick to realize the practical difficulties.

The problem is of primary concern to the medical profession. The rapid growth of lay clinics throughout the country has created a great demand for trained medical personnel, trained physical thrapists, and speech and occupational therapists. The communities have come to realize that no such trained personnel exists in adequate degree, and no such demand could possibly be met with the means now available for training small groups under personal direction. An attempt has been made to bring to the younger members of the profession the opportunities of postgraduate medical training in this new and extensive field.

Although some of the pioneering work has been done in the field of medicine (Crothers, Phelps, Carlson, and Deaver), there still remains much that must be clarified.

SCIATIC SCOLIOSIS

Samuel Kleinberg, M.D., New York, N. Y. In THE AMERICAN JOURNAL OF SURGERY, 80:3:332, September 1950.

In the acute phase rest and gentle physical therapy are most helpful. These may be supplemented by strapping of the back, wearing of a low back belt, corset or a plaster of paris jacket. The affected sciatic nerve should then be stretched by reflexing the limb at the hip with the knee in complete extension. This maneuver should be carried out very slowly. At least ten minutes should be spent in stretching the nerve. This type of manipulation has two

(Continued on page 74)

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Physical Medicine (Continued)

dangers, namely, dislocation of the hip and rupture of the sciatic nerve.

When the plaster is removed, the patient is still kept in bed for a week or ten days while the brace is being made. During this time the patient is instructed in mild exercises for his back and leg. These he performs three times a day, increasing the number and strenuousness of the exercises gradually.

When the brace is finished, it is applied and the patient is permitted to sit up in bed or on a chair, then to stand and finally to walk. The patient's activity is increased slowly; and when he can get about freely, he is discharged to office care. Physical therapy in the form of baking and massage accelerates the recovery. The brace should be worn for three to six months and replaced by a low back canvas belt. The patient usually can return to his customary occupation, if it is not laborious, in about three months. In those who have to perform hard labor the convalescence should be prolonged at least six months.

Sciatic scoliosis is a symptom complex arising from disorder in the lower back. This clinical syndrome is of frequent occurrence, being found chiefly in otherwise healthy individuals between twenty and fifty years of age. The most important problem in this syndrome is to identify and localize the essential causal pathologic lesion. Fortunately, the lesion is readily recognized by a careful history and a methodical examination. The vast majority of patients suffering from sciatic scoliosis can be relieved by conservative measures. Attention has been directed to the value of manipulation and stretching of the back and the affected sciatic nerve in instances of chronic sciatic scoliosis. The technic of the stretching has been described and is recommended because of the high per cent of complete recoveries. In the refractory cases of myositis and herniated intervertebral discs surgery can be utilized to obtain a cure.

COMMON HAND INJURIES

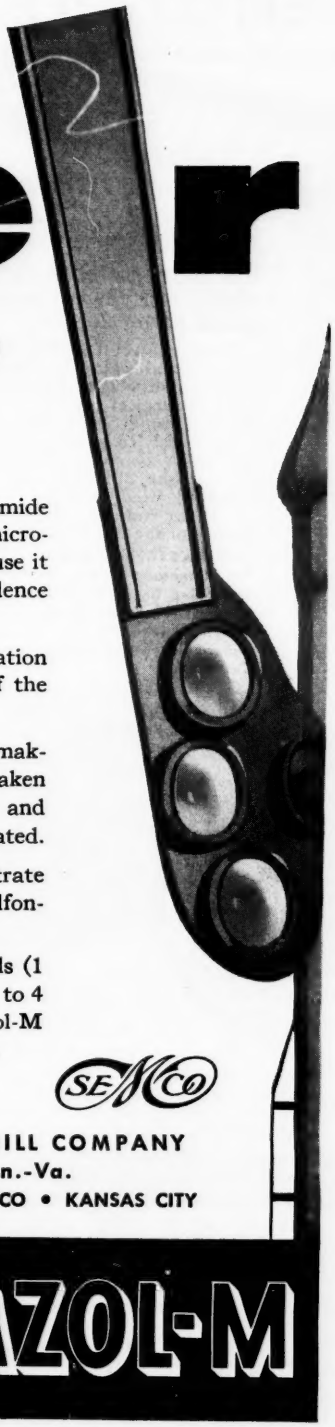
F. W. Barden, M.D., Medical Director, Saco-Lowell Shops, Biddeford, Maine. In THE JOURNAL OF THE MAINE ASSOCIATION, 41:7:267, July 1950.

Rehabilitation of hand injuries should begin

(*Continued on page 76*)

safer

in Sulfonamide Therapy



Aldiazol-M brings a high degree of safety to sulfonamide therapy. This alkalizing suspension of equal parts of microcrystalline sulfadiazine and sulfamerazine is safer because it decreases the danger of crystalluria and reduces the incidence of allergic reactions. It offers these advantages:

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The maintenance dose of Aldiazol-M is 2 teaspoonfuls (1 Gm. of total sulfonamides) every 4 hours; initial dose, 2 to 4 teaspoonfuls (3 to 6 Gm. of total sulfonamides). Aldiazol-M is available at all pharmacies in pint and gallon bottles.

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Sulfamerazine (microcrystalline)	0.25 Gm.
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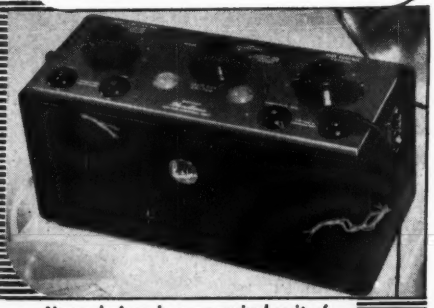

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as soon as the accident has occurred. Proper treatment will help to keep the disability to a minimum. Often, just a chance remark to the injured employee at the time of accident may have a bearing on his future disability and rehabilitation. If splinting is required only that which is absolutely necessary should be used — keeping the rest of the hand mobile. Passive motion is started as soon as it is safe to do so and, as soon as possible, hydrotherapy with whirlpool baths are begun. Exercise of the fingers is encouraged by having the patient work with varying sized rubber balls while receiving the whirl-pool. Massage is used considerably. Other exercises also are used to increase finger motion gradually — from gross movement to fine movement. We advocate the use of knitting, crocheting, etc., to facilitate fine finger motion.

Summary: (1) Hand injuries are more prevalent than suspected.

(2) Hand injuries should be given the same "high lighting" in an industrial program as does injuries to the eye.

(3) Selective placement of employees will decrease hand accidents.

(4) Proper immediate treatment of all hand injuries is essential. (Try to give treatment during the "golden period" which is six hours post trauma.)

(5) All wounds to the hand should be considered contaminated at time of injury.

(6) Rehabilitation of hand injuries should begin as soon as the accident has occurred.

(7) Attempt to get the injured employee back on the job as soon as possible.

THE MANIPULATIVE TREATMENT OF LOW BACK PAIN

Howard J. Schaubel, A.B., M.D., Grand Rapids, Mich. In THE JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY, 49:8:913, August 1950.

The principles of the conservative treatment of low backache should include more than rest, heat, braces and massage. An attempt should be made to understand the pathology in the many cases of low backache wherein the x-rays and physical examination throw no light on the cause. All joints, whether deeply or superficially situated in the body, are susceptible to

(*Continued on page* 78)

how the Paredrine in Par-Pen helps its penicillin fight intranasal infection

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Edward Ross, M.D., Medical Director
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Physical Medicine (Continued)

similar kinds of trauma, and will react alike to injury as well as to treatment. Low back pain of indifferent or indeterminate character should be thought of as an interarticular joint and adjacent soft parts injury, and treated according to the accepted methods used in the care of extremity joint sprains, strains, and dislocations.

The author has noted no ill effects following the manipulative procedure without anesthesia in over 500 patients. Spinal manipulation is not presented as a cure for all cases of low back pain; it is merely another means of attack for a difficult problem, and is not always sufficient in itself.

Spinal manipulation is a useful adjunct in the treatment of low back pain.

A complete history, review of systems, physical examination and roentgen evaluation must be done before manipulation is performed.

There are contraindications to manipulation.

Where there is demonstrable pathology other than an intervertebral disc injury or muscle spasm, manipulation is neither performed nor advised.

Patients with poor cardiac reserve constitute a definite risk to manipulation.

THE THIMBLE ELECTRODE: A DEVICE FOR THE RAPID LOCALIZATION OF MOTOR POINTS

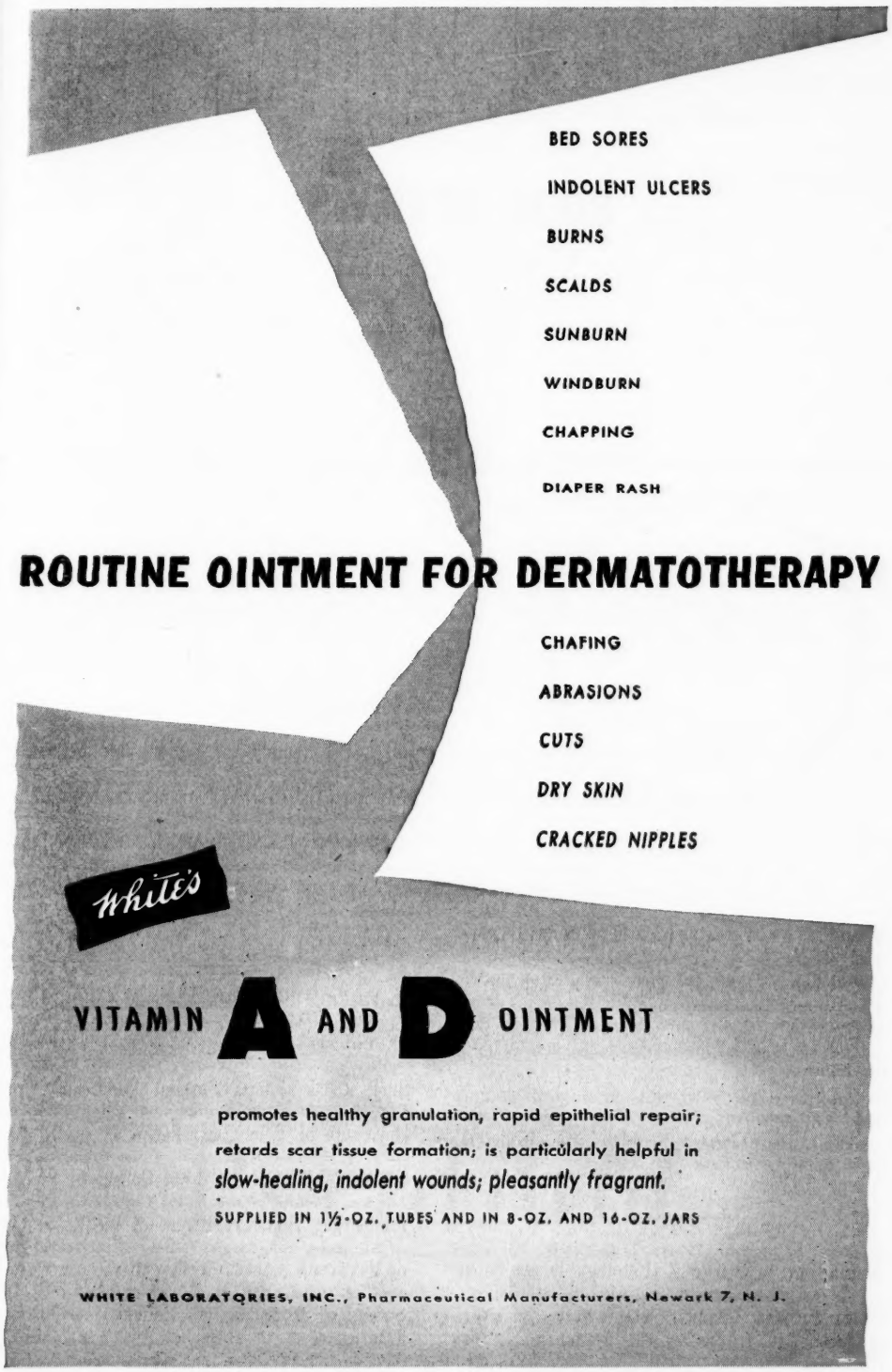
L. C. Sarnoff and S. J. Sarnoff, M.D., Boston. In *ARCHIVES OF PHYSICAL MEDICINE, 31:7:* 448, July 1950.

The consistency and rapidity of motor point localization was found to be greatly improved by a new device, which provides for the incorporation of a stimulating electrode in a flexible plastic thimble worn on the index finger.

The first WHO Anti-Tuberculosis Centre is being established in Istanbul, Turkey, with generous financial assistance from the Turkish Health Ministry and the Anti-Tuberculosis League of Istanbul. This demonstration and training centre in tuberculosis control will be open to foreign students.

Three WHO teaching-training centres for tuberculosis control are to be opened in India this year, probably in New Delhi, Patna and Trivandrum, to train medical workers in the prevention, diagnosis, and treatment of tuberculosis.

140 anti-tuberculosis clinics are being equipped in Poland by UNICEF with WHO technical assistance. The first shipment of 30 X-ray units provided by UNICEF left Rotterdam for Gdynia this month. WHO Newsletter, February-March 1950.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BOOK REVIEWS

ESSENTIAL UROLOGY. By Fletcher H. Colby, M.D., Chief of the Urological Service, Massachusetts General Hospital, Boston. Cloth, $8. Pp. 580, with 342 illustrations. The Williams & Wilkins Company, Mt. Royal & Guilford Aves., Baltimore 2, 1950.

This is the best volume that has come to the attention of this reviewer as a textbook on urology for students and general physicians. With brevity and accurate factual presentation, the embryology, anatomy, and physiology of the urinary tract is extremely well done. The volume contains eleven chapters on diseases of the various genital urinary organs. The brevity and clarity with which the pathology, the incidence, the symptoms, the diagnosis, and accepted treatment is handled in the case of each disease is, to say the least, very well done. The volume is not cluttered up with excessive wordiness and many debatable schemes. Adequate references are made at the end of each chapter that would permit, anyone interested, in further reading of the literature.

At the price of $8.00, this urological volume should be an excellent reference for any practitioner of medicine, irrespective of his interest, be it general practice or any specialty.

H. E.

HISTOLOGY, by Arthur Worth Ham, M.B. Professor of Anatomy, in charge of Histology, in the Faculties of Medicine and Dentistry, University of Toronto, Toronto, Canada. 445 figures, 756 pages. $10.00. J. B. Lippincott Co., Philadelphia, 1950.

This book is another product of The Department of Anatomy at Toronto, which has lately been the source of several excellent anatomy texts. In this book the emphasis is on correlation of histology with medicine as a whole, and the author is successful in making histology more interesting and easier for the student to remember by this means. The many photomicrographs are excellent; where necessary they are supplemented by drawings and diagrams. The section on growth and development of bone and cartilage is particularly good. Dr. Ham's style is easy and readily understood. He emphasizes aspects of histology associated with current trends in medicine, for instance adrenal histology, and correlates them with gross anatomy, physiology and pathology. This is an excellent histology text.

J. C. S.

THE PRACTICE OF MEDICINE: by Jonathan Campbell Meakins, C.B.E., M.D., D.Sc., Formerly Professor of Medicine and Director of the Department of Medicine, McGill University; Formerly Physician-in-chief, Royal Victoria Hospital, Montreal; Formerly Professor of Therapeutics and Clinical Medicine, University of Edinburgh; Fellow of the Royal Society of Edinburgh; Fellow of the Royal Society of Canada; Fellow of the Royal College of Physicians, London; Fellow of the Royal College of Physicians, Edinburgh; Honorary Fellow of the Royal College of Surgeons, Edinburgh; Fellow of the Royal College of Physicians, Canada; Fellow of the American College of Physicians; Honorary Fellow of the Royal Society of Medicine. 5th Edition, 518 illustrations, 1558 pages, C. V. Mosby Co., St. Louis, 1950.

This is the 5th edition of this popular textbook of

(*Continued on page 82*)

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The action of orally administered Pyridium *often enables patients to carry on without interruption* of normal pursuits throughout the course of *specific treatment of uncomplicated cystitis, urethritis, and pyelonephritis.*

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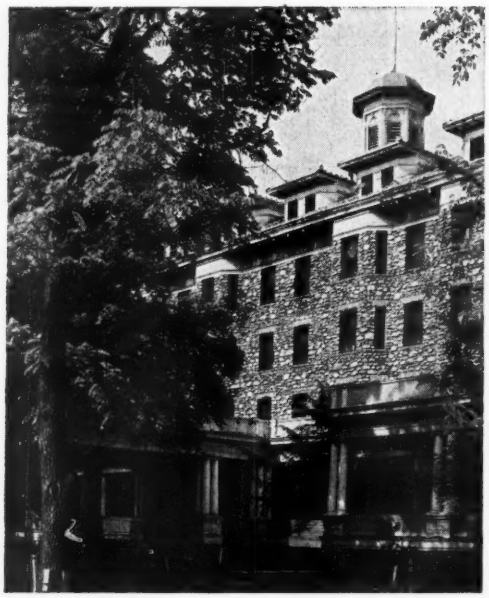

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BOOK REVIEWS (Continued)

medicine, the 4th edition having been published in 1944, and the original edition in 1936.

Although certain sections are written by Dr. Meakins' associates, this book is largely the product of one man and a few assistants. When the author is a man of the caliber of Dr. Meakins one expects an outstanding book, and the expectation is fulfilled in the present edition.

The outstanding feature of this book is the medical writing. Descriptions are concise, exact and vivid; medical terms are used in a precise manner; yet the tendency towards obscurity and profundity which is far too common in present medical writing is absent. In other words, the author has the all too rare ability to write exactly what he means.

A new chapter on psychosomatic medicine has been added and this is excellent. There is a chapter on antibiotics and chemotherapy which contains general principles that apply to the new antibiotics as well as the old. The disadvantages of the books are those of the times—medical progress under our free enterprise system has been so rapid in the past few years that even the journals are outdated.

The illustrations are abundant and adequate.

J. C. S.

CARDIOVASCULAR DISEASE: Fundamentals, Differential Diagnosis, Prognosis and Treatment. Louis H. Sigler, M.D., F.A.C.P., Attending Cardiologist and Chief, of Cardiac Clinic, Coney Island Hospital; Consulting Cardiologist, Roackaway Beach Hospital; Consulting Cardiologist, Menorah Home and Hospital for the Aged. Publishers: Grune & Stratton, New York, 1949. 551 pages. Price: $10.00

To the long list of books on Cardiovascular disease, another text has been added. Although some sections of material are fairly well discussed, this volume offers nothing distinctive. There is a good discussion of anatomy and physiology, treatment of congestive failure, coronary occlusion and myocardial infarction. Electrocardiography is given only cursory mention. There are frequent grammatical errors. In the opinion of the reviewer, this volume does not measure up to a good treatise on such a comprehensive subject.

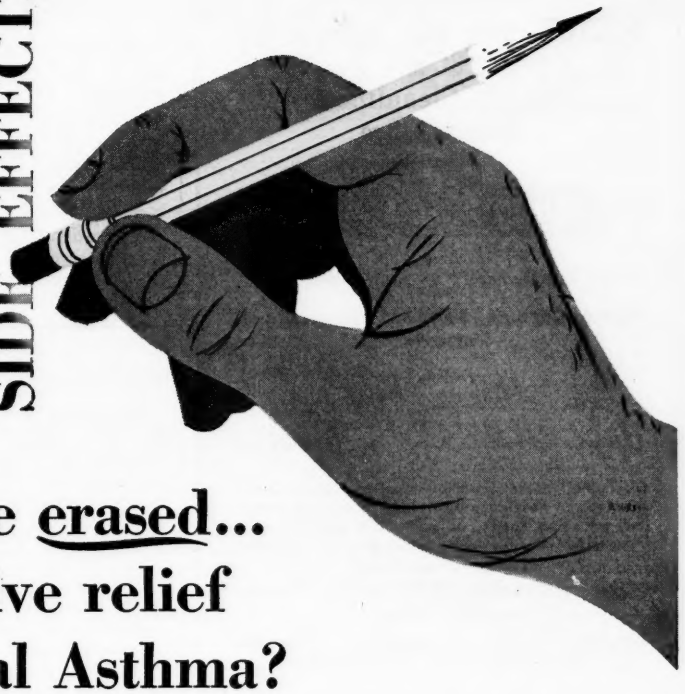
J. W. F.

CLINICAL ELECTROCARDIOGRAPHY: Francis F. Rosenbaum, M.D., Assistant Clinical Professor of Medicine, Marquette University School of Medicine; Staff, Milwaukee County Hospital; Associate Staff, Columbia Hospital; Adjunct Staff, Milwaukee Children's Hospital; Cardiac Consultant and Attendant, Cardiac Clinic, Milwaukee Children's Hospital, Milwaukee, Wisconsin. Reprinted from Oxford Loose-Leaf Medicine with the same page numbers as in that work. Publishers: Oxford University Press, New York. 1950. Price: $4.50

This small book is a reprint from the Oxford Loose-Leaf Medicine. The fundamentals and clinical interpretations of electrocardiographic tracings are pre-

(*Continued on page* 84)

SIDE EFFECTS



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[1]Hansel, F.K.: Ann. Allergy, 5:397, 1947

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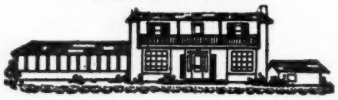

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BOOK REVIEWS (Continued)

sented in an orderly manner, covering the physiological physics, the mechanisms of cardiac function, and cardiac pathology. The fundamentals are clearly written in a concise manner. Electrocardiography has made great advances with the addition of unipolar limb and precordial leads. The author presents in an excellent way the value of unipolar interpretation. Brief mention is made of vector interpretation and since the unipolar interpretation is done so well, more space should have been devoted to vectors.

J. W. F.

BOOKS RECEIVED

The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.

NATURAL CHILDBIRTH — A Manual for Expectant Parents: By Frederick W. Goodrich, Jr., Prentice-Hall, Inc., New York; 176 pages. $2.95.

WHEN MINDS GO WRONG — A Simple Story of the Mentally Ill, Past, Present and Future: By John Maurice Grimes, M. D., twenty years a psychiatrist, four years a staff-member of the Council on Medical Education and Hospitals of the American Medical Association. Author of "Institutional Care of Mental Patients in the United States". First Edition. Illustrations by K. Alexandra White. 237 pages. Published and distributed by the author, 5209 S. Harper Avenue, Chicago, 15, Illinois. $5.00.

ADVANCES IN INTERNAL MEDICINE. Volume IV. Editors: William Dock, M. D., Long Island College of Medicine, Brooklyn, N. Y., and I. Snapper, M. D., The Mount Sinai Hospital, New York, N. Y. Associate Editors: Tinsley R. Harrison, M. D., Medical College of Alabama, Birmingham, Alabama, Chester S. Keefer, M. D., Evans Memorial and Massachusetts Memorial Hospitals, Boston, Mass., Warfield T. Longcope, M. D., Cornhill Farm, Lee, Mass., J. Murray Steele, M. D., Goldwater Memorial Hospital, New York University Division, Welfare Island, New York. 549 pages. The Year Book Publishers, Inc., 200 East Illinois Street, Chicago. $10.00.

FOOD ALLERGY. By Herbert J. Rinkel, M. D., F. A. C. P., F. A. C. A., F. A. A. A. Formerly, Associate Instructor in Medicine, University of Oklahoma, School of Medicine, Theron G. Randolph, M. D., F. A. C. A., F. A. A. A., A. A. C. P., Instructor in Medicine, Northwestern University Medical School, Michael Zeller, M. D., F. A. C. A., F. A. C. A., F. A. A. A, Clinical Instructor in Medicine, University of Illinois, College of Medicine. 492 pages. Charles C. Thomas, Publisher, Springfield, Illinois. $8.50.

PHARMACOLOGICAL BASIS OF PENICILLIN THERAPY. By Karl H. Beyer, Ph. D., M. D., F. A. C. P., Director of Pharmacological Research, The Medical

Research Division, Sharp and Dohme, Incorporated, Glenolden, Pennsylvania. 214 pages. Charles C. Thomas, Publisher, Springfield, Illinois. $4.50.

THE EXTERNAL SECRETION OF THE PANCREAS. By J. Earl Thomas, M. D., Professor of Physiology, Jefferson Medical College of Philadelphia, Philadelphia, Pennsylvania, 149 pages. Charles C. Thomas, Publisher, Springfield, Illinois. $3.50.

SKULL FRACTURES AND BRAIN INJURIES. By Harry E. Mock, M. D., Consulting Surgeon, St. Luke's Hospital, Chicago, Associate Professor Emeritus of Surgery, Northwestern University Medical School, Chicago. 806 pages. The Williams & Wilkins Company, Baltimore, 1950. $13.50.

METHODS IN MEDICINE — The Manual of the Medical Service of George Dock, M. D., Sc. D., Formerly Professor of Medicine, Washington University School of Medicine; Formerly Physician-in-Chief, Robert A. Barnes Hospital, St. Louis. A Comprehensive Outline for Clinical Investigation, Management, and Treatment of Patients with Various Medical Disorders, by George R. Herrmann, M. D., Ph. D., Professor of Medicine, University of Texas Medical Branch at Galveston: Director of the Cardiovascular Service and Heart Station, University of Texas Hospitals, Consultant in Medicine to the Surgeon General, U. S. Army; Consultant in Vascular Diseases to the Marine Hospital, U. S. P. H. S. Second Edition, Completely Revised. 488 pages. The C. V. Mosby Company, St. Louis, 1950. $7.50.

PHYSIOLOGY OF THE EYE — Clinical Application. By Francis Heed Adler, M. A., M. D., F. A. C. S., William F. Norris and George E. de Schweinitz, Professor of Ophthalmology, School of Medicine, University of Pennsylvania, and Consulting Surgeon, Wills Hospital, Philadelphia. 709 pages, with 319 illustrations, including 2 in color. The C. V. Mosby Company, St. Louis, 1950. $12.00.

INDICATIONS FOR AND RESULTS OF SPLENECTOMY. By Frederick A. Coller, M. D., Alexander Blain, III, M. D., Gould Andrews, M. D., From The Departments of Surgery and Medicine, University of Michigan Medical School, Ann Arbor, Michigan, 97 pages, Charles C. Thomas, Publishers, Springfield, Illinois. $2.25.

THE PREPARATION OF PHOTOGRAPHIC PRINTS FOR MEDICAL PUBLICATION. By Stanley J. McComb, F. B. P. A., Section on Photography, Mayo Clinic, Rochester, Minnesota. 65 pages. Charles C. Thomas, Publisher, Springfield, Illinois. $2.00.

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. . .Since the war, there has been amazing progress in the field of agriculture, particularly in the development of new economic poisons. It is believed that the public is fully informed regarding the abilities of DDT, but it is doubted that many people are informed concerning other insecticides that are far more toxic to insects and, unfortunately, also to human beings. Formerly, lead, arsenic, copper, sulfur, and fluorides were largely used, but they have given way to the more potent organic compounds.

. . .The success that the use of DDT achieved as an insecticide stimulated research in the field of organic insecticides, with the result that several new products have been marketed prior to the accumulation of sufficient data regarding their toxicity to warm-blooded animals. Space does not permit reference to the data concerning the toxicity of these various insecticides that appear in a gradually increasing literature on the subject. Whereas chlorinated organic compounds such as DDT, chlordane, benezene hexachloride (gammexane) and chlorinated camphene have been used with some adverse effects, most industrial hygienists are acutely aware of the problems presented by the use of the organic phosphates such as hexaethyltetraphosphate (HETP), O, O-diethyl, O-p-nitrophenylthiophosphate (Parathion) and tetraethylpyrophosphate (TEPP) because these substances have been proved to be more toxic to human beings and several deaths have been reported as a result of their use. Parathion has, perhaps, received the greatest attention, and two of the concerns manufacturing it have had extensive animal experiments performed to evaluate the toxicity of this compound.

. . .Another occupational disease hazard that, although not new, has recently received nationwide attention is that occasioned by the use of shoe-fitting fluoroscopes. Studies have been made in Detroit, New York City and Cleveland, as well as some of the states, including Massachusetts, of the hazards to employees operating these machines and to the public. One study indicated that the chief hazard is occasioned

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by the use of old machines, which were not properly constructed or protected, and by the fact that the persons operating these machines have not been properly trained in the use of x-ray equipment and do not appreciate the potential dangers from the use of such equipment.

Some of the concerns that repair these machines have indicated that they can be adequately shielded to reduce the scatter radiation to a minimum. It is also possible to reduce the intensity of x-rays to the foot of the person using the machine by reducing the current utilized by the tube, by providing a protected 1-mm.-thick aluminum filter and by utilizing a high-quality fluorescent screen. If, under the above conditions, the timing mechanism is properly set to limit the exposure to five seconds, during which an adequate fitting can be made, the dose in the foot chamber will be 1r. *Excerpt: Newer Occupational Diseases, John B. Skinner, Boston, New England J. M., Sept. 28, 1950.*

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We are not concerned here with coronary deaths among the aged or prematurely diseased. . . .The factors causing a coronary complex in the people in these earlier decades differ markedly from those in the aged. In older people, the primary cause of this trouble is an extensive intimal damage in the coronary arterial tree. Secondary factors are sedentary life, improper diet, and probably disease. In the younger years this initial damage is usually only moderate to minor. Several other factors apparently combine in varying importance to cause an infarction. Among these are prolonged nervous tension, the prothrombin time level, diet, and smoking. It is generally conceded that coronary constriction from chronic over-stimulation due to high nervous tension, worry, and overwork plays an important role in the foregoing disease entity. Therefore, we shall not add further comment. However, it is different with the other factors mentioned. *Excerpt: The Prediction and Prevention of Coronary Thrombosis in The Younger Age Groups, R. L. Parsons, M.D., Monterey, Minn. and J. J. Heimark, M.D., Fairmont, Minn., Minnesota Medicine, Oct. 1950.*

ON THE WITNESS STAND

. . .A witness should always be as polite and courteous in answering questions put to him on cross-examination by counsel for the other side as he is in answering those of counsel who called him to testify. Do not let your feathers get ruffled if opposing counsel does not seem quite as polite and courteous to you as counsel for your side. The chances are he is needling you for the express purpose of getting you angry.

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